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Liberating Voices in School

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Reinhard Bauer | Sabine Zauchner (Eds.)

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Preface

When we first invited the authors for this volume, we shared a common vision: to explore how education could become more participatory, democratic, and empowering. "Liberating Voices in School" brings together scholars, educators, and practitioners from different disciplines who share a commitment to strengthening student voice and agency. Each contribution in this book builds a bridge between theory and practice, reflecting on how learning environments can evolve into spaces where students are recognized not merely as recipients of knowledge, but as active participants and co-creators of their education.

The idea for this book emerged at the intersection of two sources of inspiration: Douglas Schuler's "Liberating Voices: A Pattern Language for Communication Revolution" (2008) and the Austrian research and innovation project *StAct – Start and Act*, funded by the Austrian Research Promotion Agency (FFG). Schuler's work, which builds on Christopher Alexander's concept of pattern language (Alexander et al., 1977), proposes a set of communication patterns designed to empower people to strengthen their communities, solve social problems, and promote democracy. His central message is that by developing and applying effective patterns of communication, citizens can raise their voices, mobilize others, and engage in shaping a more just and participatory society. For us, this idea resonated deeply with the goals of *StAct*, which was conceived to translate such patterns of participation and empowerment into the field of education.

In *StAct*, students were not viewed as objects of instruction, but as subjects of inquiry – co-researchers who identify questions that matter to them, conduct investigations, and communicate their findings to others. The project demonstrated how much creativity, reflection, and social intelligence young people bring to complex challenges when they are trusted to take ownership of their learning. This approach, rooted in active participation and self-directed inquiry, aligns strongly with Schuler's call to "liberate voices" through communication and collaboration. By giving students the means and the confidence to express their perspectives, *StAct* sought to create the conditions in which education becomes a living practice of democracy.

With this book, we wanted to extend these ideas beyond the project itself and engage colleagues who, from their own perspectives, work toward the same goal: to make schools more inclusive, participatory, and forward-looking. The chapters collected here examine this vision through different lenses – didactic theory, democratic education, future competences, participatory practice, and the design of enabling learning environments. Together, they present a multifaceted picture of what it can mean to "liberate voices in school."

As editors, we are pleased to have brought together researchers, teachers, a principal, architects, and designers from the United States of America, Switzerland, Germany, and Austria who have all engaged with the theme of *Liberating Voices in School* and contributed their diverse perspectives to this volume. Please note that British *and* American English are used throughout this volume, reflecting the linguistic diversity of its contributors.

Our intention was to create a platform that brings together theoretical reflection and practical innovation. The contributions illustrate how communication, collaboration, and shared responsibility can transform schools into communities of learning in which all participants – students, teachers, and researchers – learn from one another. They offer models and examples that show how participation can become part of everyday educational practice, how learners can develop the courage to act, and how schools can become places where social and democratic transformation begins.

We hope that *Liberating Voices in School* will speak to educators, researchers, principals, and policymakers who believe, as we do, that education must be both inclusive and emancipatory. The book is addressed to those who are searching for ways to strengthen student voices and to rethink schooling as a cooperative endeavour. If the ideas and examples gathered here inspire readers to listen more attentively, to trust more deeply, and to act more courageously in their own educational contexts, then this project will have achieved its aim.

We thank Stefanie Egger for her drawings, which accompany each part and perfectly capture the spirit of *Liberating Voices in School*.

Sabine Zauchner & Reinhard Bauer
Vienna, October 2025

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Introduction: Liberating Voices in School – Empowerment, Participation, and the Courage to Act

Reinhard Bauer & Sabine Zauchner

Education in the twenty-first century faces a decisive shift. The world's accelerating social, technological, and ecological transformations demand more from schools than the transmission of knowledge. They require spaces where young people learn to think critically, act responsibly, and collaborate creatively – where they develop the courage to shape their futures rather than merely adapt to them.

The idea of *liberating voices*, first articulated by Douglas Schuler (2008), provides a guiding metaphor for this book. Schuler's vision of civic intelligence – the collective capacity of people to think and act wisely for the common good – resonates deeply with the mission of this volume. Building on these ideas and on the participatory research experiences of the Austrian project *StAct – Start and Act*, this book explores how empowerment, participation, and agency can be realized in education. Together, the chapters examine how students' voices can be heard and strengthened, how democratic learning cultures can emerge, and how schools can become genuine communities of participation.

1 From Citizen Science to Co-Research

The conceptual foundation of this book draws on the WYRED model – *net-Worked Youth Research for Empowerment in the Digital Society* (García-Peñalvo & García-Holgado, 2019) – which establishes a participatory research cycle involving networking, dialogue, co-research, and reflection. Within this framework, young people are not passive subjects of study but co-creators of knowledge. They develop questions that matter to their lives, design inquiry methods, interpret findings, and share their results publicly (Mirra et al., 2016).

This participatory approach aligns with a broader understanding of entrepreneurship education as outlined in the *EntreComp Framework* (Bacigalupo et al., 2016) and the *TRIO Model* (Aff & Lindner, 2005). Entrepreneurship here is conceptualized as a *transversal competence* – the ability to perceive opportunities, mobilize resources, and transform ideas into value for others. Lackéus (2015) describes this as *learning through action*, an approach that combines initiative,

collaboration, and reflection. The *StAct experience* demonstrated that when students take their learning into their own hands, they display creativity, empathy, and a sense of responsibility that extends far beyond conventional expectations. Teachers, meanwhile, evolve from instructors into facilitators and mentors, enabling learning processes rather than directing them.

In this way, empowerment becomes both a pedagogical and democratic practice. It is not simply about transferring responsibility to learners, but about cultivating an environment of trust, dialogue, and shared decision-making – what we call *enabling didactics*.

2 Liberating Voices and Civic Intelligence

Liberating Voices in School is grounded in the conviction that education must nurture civic intelligence – the collective capacity to deliberate and act for the common good (Schuler, 2008). Schools are not only sites of knowledge acquisition but cultural ecosystems in which democratic values can be learned, practiced, and re-invented. Empowering students to speak, listen, and collaborate is therefore not an optional supplement to learning but a vital condition for democratic sustainability.

The concept of *liberating voices* is not limited to verbal expression; it encompasses the freedom to ask questions, to explore, to design, and to act. In this sense, education becomes a living practice of democracy – a process of co-creation and continuous reflection that connects personal growth with social transformation.

3 Structure of the Volume

The volume brings together diverse perspectives from educators, researchers, and practitioners who share a commitment to participatory and enabling education. Its five parts and 15 chapters represent different dimensions of *liberating voices*: didactics, democracy, future competences, student agency, and spatial design.

The volume begins with an opening reflection by Douglas Schuler, whose seminal work *Liberating Voices: A Pattern Language for Communication Revolution* (2008) provided the conceptual foundation for this book. In "*Liberating Voices in Schools: Nurturing New Seeds for Survival: If Not Hope, at Least a Modicum of Meliorism*", Schuler revisits his original vision of a *pattern language* – a network of interrelated ideas designed to support democratic participation and collective problem-solving. He explores how communication and design can foster *civic intelligence*, the collective capacity of people to think and act wisely together for the common good. Schuler's reflection sets the tone for the volume by inviting

readers to view schools as living spaces for participatory transformation – places where dialogue, collaboration, and creativity become the foundations of social change.

The first Part, *Enabling Didactics*, explores what it means to teach for and through empowerment, creating learning environments that make participation and voice possible. Rob Knapp's *"Teaching Geese to Fly"* presents a poetic metaphor of learning as a collective act of flight, emphasizing how communities of learners can develop collective competence. Lin Nelson's *"Community – Zone of Unsettled Learning and Challenging Connections"* conceives of community as a dynamic, unsettled space where tension, care, and dialogue generate growth. Doris Pfingstner's *"Modulare Mittelschule Aspern – From Brennpunktschule to National Award-Winning Institution"* documents the transformation of a Viennese Compulsory Secondary School through modular learning structures and team-based collaboration.

The second Part, *Democracy in the Context of Enabling Didactics*, links empowerment to inclusion and democratic participation. In *"Inclusive Education as a Prerequisite for Participation: What Strategies Empower Marginalized Voices in the Education System?"*, Sabine Albert discusses strategies for inclusive school and teaching development grounded in the UN Convention on the Rights of Persons with Disabilities (2006). Ursula Maurič's *"Global Citizenship Education as a Contribution to the Resilience of Democratic Societies"* expands this view, showing how critical-inclusive global citizenship education (k.& i. GCE) fosters reflection, empathy, and global responsibility.

The third Part, *Future Competences and Skills*, addresses the competences required for life in complex, uncertain environments – creativity, collaboration, reflection, and resilience. In *"Future Competences: Skills for Tomorrow – and Why They Are Important Today"*, Manfred Pfiffner and Saskia Sterel show how project-based learning can build future-ready competences. Anastasiya Savran, Rolf Laven, and Wolfgang Weinlich's *"Art Education in the Context of Service-Learning at the Urban Diversity Education College and University for Teacher Education Vienna"* explores how art and Service-Learning foster empathy, social engagement, and civic imagination.

The fourth Part, *Students as Designers of Their Own Education – Success Stories*, presents examples of student-driven learning. Sabine Zauchner and Reinhard Bauer's *"The Convergence of Empowerment, Competence, and Outcomes: Insights from the StAct – Start and Act Project"* integrates empirical findings from the *StAct* project, linking empowerment with authentic learning outcomes. Mehmet Fatih Tankır and Ursula Maurič's *"From Learners to Community Members – The Educational Network voXmi and Transformation Through Language, Participation, and Shared Learning"* explores how participatory formats cultivate belonging and shared responsibility. Georg Jäggle's *"Recycling Heroes: Participatory Learning for*

a Sustainable Future – How to Foster Awareness and Reflection" illustrates how environmental projects can build ecological literacy and civic responsibility.

The fifth and final Part, *Designing Schools for Enablement*, turns to the physical and social environments that make participation possible. In *"Designing a Classroom (School) for Enablement"*, Stefanie Egger and Christian Lepenik discuss participatory design as a process of listening, prototyping, and co-creation. The architectural collective *nonconform* – Katharina Forster, Maria Isabettini, and Caren Ohrhallinger – contribute *"Spatial Insights – How a School Redevelopment Process Becomes a Living Example of Democratic Co-Creation"*, showing how participatory architecture can build community ownership. Katharina Rosenberger's *"Creating Supportive Learning Environments for Schools"* concludes the volume by examining how spatial and relational design can foster creativity, collaboration, and well-being.

The volume concludes with a Closing Reflection by the editors, which returns to the central ideas introduced at the beginning of the book: empowerment, participation, and the courage to act. Rather than offering a traditional conclusion, this chapter synthesizes the key insights that have emerged across the contributions and links them back to Douglas Schuler's concept of a pattern language for participatory communication. The reflection considers how the patterns of practice described throughout the volume – listening, collaboration, inclusion, and co-creation – form an evolving framework for democratic learning. It closes the book not with final answers but with an invitation to continue the conversation, to adapt and extend these patterns within future educational contexts.

4 Seeds of Change

Across these five Parts of the volume, a shared conviction guides the contributions: liberating student voices can transform education – from instruction to participation, from control to collaboration, from transmission to co-creation. Empowerment, understood as both a pedagogical and democratic principle, has the potential to turn schools into laboratories of civic intelligence (Schuler, 2008) – communities capable of thinking and acting together for a sustainable future.

The "seeds" presented in this volume – participatory research, inclusive didactics, enabling environments, and creative Service-Learning – illustrate how transformation often begins locally but grows collectively. *Liberating Voices in School* thus opens a dialogue rather than closing it: an invitation to educators, researchers, and policymakers to listen, to trust, and to act – nurturing schools that are, at their core, communities of empowerment and hope.

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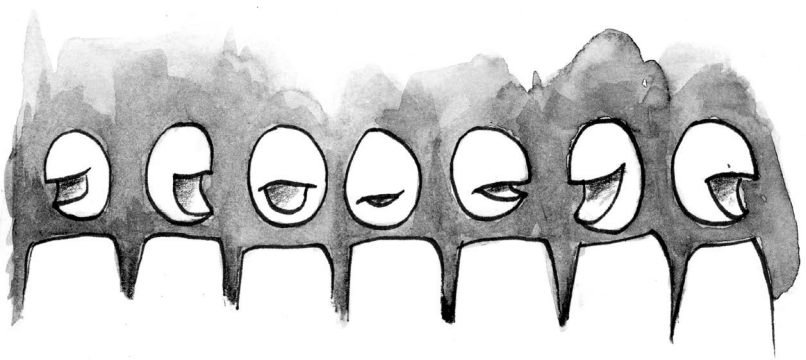
Opening Reflection | A Call for Liberating Voices in School



Drawing by Stefanie Egger

Chapter 1 | Liberating Voices in Schools: Nurturing New Seeds for Survival – If Not Hope, at Least a Modicum of Meliorism

Douglas Schuler

After several false starts, I decided to begin this chapter on a positive note. Taking a look at the profound and, frankly, terrifying aspects of the world we have created, will have to wait awhile, at least until the next section. I am only half kidding, but too much catastrophic forecasting can have the unfortunate result of having people withdraw completely, which is exactly the opposite of what is needed right now. But I am not at all kidding when I suggest that hopeful signs do exist. This chapter is about those possibilities. It seems that the raw materials we need to build upon are within reach. And I count this book among them. In other words, please read the book – and help realize the vision!

- Researchers, policymakers, activists, and others are showing heightened awareness of the thorny problems facing humankind and the need for interdisciplinary and multi-sectoral approaches.
- Communication technology and collaborative approaches can help provide infrastructure for new collaborative ensembles.
- Increasing availability of relevant data for health, environmental, and other realms makes it possible to use more and more accurate information in collaborative projects.
- Increasing number of projects addressing systemic problems effectively and holistically, using new networked approaches.
- Finally, and while goodwill, trust, and cheer are not always evident in our dealings with each other, there is still abundant quantity that we must count it as a resource. And when these positive aspects are coupled with creativity, resourcefulness, intelligence and dedication, that educational systems often aspire towards, it seems possible to achieve some progress, even as utopia is ever elusive.

The main point of this chapter – and of this book – is that new approaches to education are necessary if we are to collectively create a better future. The type of education that is needed must build on existing ideas and hopeful signs introduced above while challenging existing institutions and trajectories at the same time. While not providing a panacea, it is clear that we will never be able to make inroads on our 21st Century problems without substantial reinvention and

reconfiguration of our educational systems. This, of course, is much easier said than done. And while it will undoubtedly be tackled in different ways in different settings, some things can be said for all, or almost all, locations. Namely, that the educational approaches must be directed purposefully towards civic goals (not via side-effects or vague ideas such as "efficiency", the "free market" or "progress"), and that they need to be collaborative and generative. The approaches must not be static; they must continue to grow, adapt, and learn, while keeping human values uppermost, and not be locked into one discipline, one sector, one country, one person. one culture, or within other fixed boundaries.

Our collective civic intelligence needs an upgrade and schools are key. Acknowledging this need and working to overcome is not idle, unprecedented, or impossible. In the United States, for example, the Junior College (now *Community* College) system was created "to democratize both American higher education and the students who came through their open doors" (Franco, 2002) and both aims are extremely timely today: educating for effective and responsible decision-making and opening up higher education to larger, more diverse, populations.

1 Challenges for Humankind – and Education

The world is providing an inexhaustible cornucopia of challenges and as these challenges mount, the greater the need for transformed education becomes. This transformation of the education system must be built on the raw materials mentioned above, and those in turn can be used to build the foundation for future transformations.

2 Social and Environmental Degradation

One of the saddest – and most frightening – consequence of humankind's vast powers is its (our) tendency to wield them destructively. It is the increased power that can be wielded and the increasing tendency to use it destructively that have brought us all to an extremely precarious and unprecedented situation, a chaotic polycrisis. Without sugar-coating or exaggeration, we are approaching tipping points for the global environment, whose transgressions will lead us down unpredictable and catastrophic pathways.

This is spotlighted by chronic problems such as inequality, corruption, oppression, and intolerance as well as sudden convulsions, such as war, arguably humankind's most degenerate endeavor. Of course there are still natural emergencies, such as hurricanes or floods, but even then, humans have to take responsibility for the inadequate planning that takes place before the event (even when it was fully expected) and botched rescue and recovery actions afterwards.

I see two main spheres of looming catastrophe, the degradation of the environment and degradation of the social environment (or social sphere). I mention them separately, but they are inseparable. Degradation of the natural environment leads to degradation of the social environment and degradation of the social environment leads to degradation of the natural environment. Collectively, under the dominance of their economic systems, humans have become assiduous and effective agents in the degradation of the environment through energy and land use and disregard for the natural environment. This results in climate change, famine, habitat collapse, flooding, pandemics, and diminished longevity and quality of life. We do not know how this will all play out, especially when various tipping points are transgressed simultaneously and the effects cascade chaotically through social and environmental spheres, making their deadliest impacts on marginalized and economically disadvantaged communities. Tragically, limits have been breached in six of the nine planetary boundary areas (Richardson et al., 2023), areas such as biosphere integrity and changes to freshwater, land-systems, and climate, where recovery is difficult and dire consequences from inaction are increasingly more likely. Things also look grim when it comes to the degradation of the social environment, especially in today's wired world of extreme asymmetry between producers and consumers of information, where surveillance, fear, intolerance, conspiracy, extremist ideology, and weaponized ignorance can thrive. The allure of easy answers is irresistible to some people, making them easy targets for authoritarians with loud, poisonous, angry diagnoses, who. in turn, work against peaceful environmental and social progress. The two trajectories of degradation, like multiple atmospheric rivers conjoining into larger ones, take their most virulent form when authoritarian governments take root, and their connections to violence, cronyism, organized crime, and environmental despoliation conspire synergistically.

3 Educational Response

In democratic societies (but not just in them) citizens, for better or worse, must enjoy or suffer the will and practices of other citizens. This means that all citizens, whether or not they do anything with that knowledge, have some influence on, and responsibility for, the current and future state of the world. This may come as unwelcome news to many people, it is a burden that they would rather not shoulder. But, whether or not it is wanted, it nevertheless is a reality. There are many ways of expressing this responsibility positively, including being informed, voting, volunteering, writing op-eds, teaching civics, and protesting. At the same time, many people who are involved in those practices may not even realize or acknowledge their contribution to the common good.

Part of what makes the work of environmental and melioration necessary – and particularly challenging – is that the people and the institutions who are actually tasked with addressing public problems are not necessarily doing that work. The responsibility that one might want to see, or, even, expect from those in power, is often deficient or absent. Sometimes – if not often – their feeling of responsibility is directed away from the common good, to themselves, their immediate family, or fellow elites. In short, many are actively pushing in the wrong direction.

A large part of the challenge facing education, is providing and cultivating useful tools, institutions, and ideas that will help society address its existential ills. This involves looking deeply at the roles that human psychology, institutions, culture, and values play in this, consciously working to see the negative roles as well as the positive, and engaging appropriately. Most critically, the inert or otherwise under-realized potential that exists needs to be developed as expeditiously as possible. The time period for hastening these processes is short and it is now upon us. The clock is ticking. Unfortunately, humankind's historical record does not support the assumption that adequate civic intelligence will simply emerge when it is needed.

4 But, before moving on…

Admittedly, looking at this subject from the vantage point of planetary survival (and with a litany of depressing news) might not be helpful for all readers. It is so vast as to be beyond our ability to grasp it in its entirety. Different people respond in different ways to this challenge: Many will just reject it. This is not an unreasonable way to deal with it: What does it matter if we develop engaged and empowering school programs if everybody is going to be thrust into a brutal, toxic, dangerous world anyway? And, barring that, how would working with a project like that actually help in any way to reduce the big global problems?

Although I claim that this work is vital for the profound real social and environmental melioration that we need, it is not only for that. Nor are our suggestions intended as a prelude to a long painful march of drudgery and unrewarded struggle. This work can and should be joyful in itself. It can have other benefits as well – even if long-term survival for our species cannot be guaranteed. The work can be rewarding and affirmative for both individuals and communities. It would be important even if there were no existential challenges to address. And it would be worth doing, even if its successes were few and far between.

The idea that this work should be enjoyable and rewarding, may seem like an additional burden or barrier to be reckoned with as we imagine the education we need, but with all the intentions and constraints on the table (albeit in broad

terms) the chances increase that we will do this well. We can learn about leadership and working with others, for example, to improve the overall capacity and resilience on the local level – but also with the awareness of the global.

And the small – and seemingly fragile – little things frequently add up and they can add up more if the people doing them think of them as steps along the way. They add up actually (in social capital,) and they add up little by little through the creation of new cultural attitudes about what is possible. Students will grow up to become adults and raise children who can carry this forward. At the same time, learning to compartmentalize appropriately – whatever that might mean – is also critical. There is fertile ground between the unproductive poles of denialism and adopting the totality of the pains of the world.

5 Current educational context

Why are our current educational systems unable to substantially help address our current needs? Why do they need, if not a total overhaul, at least a meaningful reprioritization? The short answer is that modern education is too narrowly focused, and it is too narrowly focused on the wrong areas.

Modern education is implicitly predicated on the idea that it is preparing people for existing social roles. This short-term thinking, as well as institutional inertia discounts both thinking about the future and thinking about the broader common good. Generally speaking, it means training them for employment of some sort, even if the employment means continuing in an educational or research role. In the US, the focus on STEM – Science, Technology, Engineering, and Mathematics – helps prepare people to be absorbed into the vast computer industry. Although the wages are often quite good (in Seattle, for example, where I live, the wages of those in tech are a little over twice the average wage in the city). the goals of these companies are well established and addressing the real issues facing humankind today is not one of them. So, as the problems multiply, the education system is, in many ways, preparing students to not be part of the solution, but to be used as pieces of other people's "solutions". Thus, one of humankind's strongest resources is directed towards private enrichment, while at the same time that financial interests and economic ideology exert tremendous influence, many institutions of higher learning have themselves become large economic entities where profit-making is the dominating factor (Baldwin, 2021).

Education is also subject to ideological fiddling; from Russia, to China, to the United States, education too often includes little to no critique of one's own country and is subject to substantial historical adjustment where the bad bits are glossed over or omitted. Unfortunately, this means that students of this system are being led to believe that their country – unlike all or most of the others – is free

of historical patterns of injustice or acts of violence and thus no responsibility, remittance, or other change to the status quo is needed.

One of the main messages of the educational systems is the focus on individual achievement. In a more future-centric view, *collective* achievement would be also valued and considered, realizing that the whole is not necessarily the sum of its parts.

The grading system reinforces the idea of the individual achievement. This standardization of knowledge also implicitly adopts the idea of mass-production at the core of education, regardless of whether that describes the practices of any individual teacher. And viewing the collection of letter or numeric grades of a group reveals little about the strengths and weaknesses, or the diversity of the group. Whether it's inborn or a feature of modern culture, people are familiar with point systems, in which both grades and dollars act as proxy measures of success although neither is an adequate measure of the education that is truly needed.

Another problem is dividing people into various categories, where those in one category are allowed or expected to perform some role while others are kept away. Another problem is specialization. Digging deep is good, but not necessarily ideal for addressing the multiplicity of problems we face. Breadth as well as depth is necessary.

Moreover, when we refer to education, we are generally referring to formal education, which in many, if not most, societies, begins at around five years old and ends at different times for different students; those who will go on to professional work will spend more time in formalized educational settings while those who go on to vocational work will not. Also, education, unfortunately, is often perceived as something that stops at some point. Education should not stop – or stop evolving – with individuals, groups, or institutions and our approach must keep that uppermost as we work to transform our systems.

If you are reading this, the chances are good that you are living in a WEIRD country, one that is Western, Educated, Industrialized, Rich, Democratic. Although these attributes do not necessarily apply to everyone within a WEIRD country (and many WEIRD countries seem to be wavering at the moment as to their democratic commitments), there is a strong implication that the whole world operates in WEIRD ways, which is not altogether true. The take home lesson here is not that one way of regarding things is good or bad or anything else, but that the future of the world is too important to exclude a substantial number of its inhabitants and their perspectives and knowledge.

There are, of course, untold practical reasons why this issue cannot be addressed overnight, but the knowledge of these divides is important, and it is more likely to play a role when it is acknowledged.

To address those shortcomings discussed above we keep a few more questions in mind as we proceed. *What stands in the way of developing the educational systems we need? And what must we do to support and grow them when they are in*

place? How do we build on the trajectories discussed in the first section, the positive ideas and institutions that give us reason to be optimistic?

6 Conceptual Foundation

The relationship between problems we face and our ability to address them characterizes a critical dynamic that should be a central focus in education. If educating is not seriously exploring that, it is failing. That does not mean (of course) that studying mathematics or learning to read are not critical, nor that everything should be taught within a context of problem-solving (although I do not summarily dismiss that approach) only that we must keep the problem solving imperative uppermost. Sometimes we need to remind ourselves that the problems that we face are extremely destructive, they are not going away, and the institutions and the people that should be addressing those problems are not addressing them adequately.

The link between problems and the means of addressing them is intelligence, the diverse set of capabilities that any organism or collectivity has for successfully interacting with its environment. For humans, the environment is primarily a social one – it includes a wide range of features that we must deal with, faces. families, laws, jobs, and norms – but it includes the natural one as well – with its constellation of features such as wind, rain, animals, ecological niches, water turbidity, viruses, mitochondria, and plants that we must also contend with. And education is the name we give to the often formalized approach for developing or shaping that intelligence in human societies.

7 Wicked Problems

In 1973, Horst Rittell and Melvin Webber introduced a new term – "wicked problems" – to describe a class of social problems that had been included in a broader set simply considered as *problems*. Wicked problems are the most vexing ones (although some are more wicked than others (Schuler, 2021) and they are readily distinguishable (at least in hindsight) from other "tamer" ones via a set of characteristics, which were more-or-less defined by Rittel and Webber in their original article. This designation is more radical than it first appears. It basically says that looking for a single answer, or looking for an answer using a single perspective, or any number of other similar assumptions that are commonly, if implicitly held, is futile. Repairing a tire on a bicycle is not a wicked problem, nor is solving a crossword puzzle or equation, regardless of complexity. Unfortunately, many wicked problems are assumed to be ordinary, normal problems, that have well-defined *problems* and *solutions*. This would be seen in a project such as designing a bridge

if all the social and cultural elements were disregarded or simply turned into a number, such as average number of passengers in a vehicle crossing the bridge. And although approaches to less-than-wicked problems are indispensable in addressing wicked problems, the two types are basically different species.

Thus, wicked problems describe problems involving poverty, oppression, historical injustice, incarceration, education, environmental degradation, corruption, war, climate change and many more, that the educational approaches we are considering here must confront, even if we are unable to "solve" them. This term is increasingly being employed by researchers and practitioners who focus on major challenges, problems that defy ordinary "solutions", precise formulations, or "final" desired states. In fact, every aspect of wicked problems seems hard to nail down, especially as the goals of addressing wicked problems are themselves, "unclear, unknown, and conflicting" (Weber, Lach & Steel, 2017). To some degree the new term furnishes a common, public focus and thus enables its "cognitive development" (Sartori, 1984).

Judging by the new papers in an extremely wide variety of fields that are being published every day, the world seems to be adopting the idea of wicked problems as a useful paradigm. The consequences of this new perspective will presumably become clearer as time goes on. Since the initial coinage of the term, the very ubiquity of wicked problems seems to be part of the new awareness. Once the characteristics of wicked problems become clearer, the nature of our inquiry and action planning changes. We must change our perception from problems that are solvable and likely to be addressed by experts to ones that require "more effectiveness, more accountability, and more democracy" (Weber et al., 2017), all features of what I call civic intelligence. It also enables us to entertain a more confident disdain for those proffering once-and-done "solutions", especially these for problems like climate change, poverty, disease. economic disparity, war, and other issues that seem to perennially haunt humankind, and to think more productively with *patterns* of perspectives and actions, that capture *general* approaches to addressing problems that can be adapted to meet various circumstances.

8 Civic Intelligence

Everyone would agree that "intelligence" is needed if we are to make headway on addressing humankind's wicked problems. But, what does that actually mean for this endeavor? *What features should the intelligence embody? Who or what has (or should have) the intelligence – and how do they obtain it? What does it look like? And who is supposed to be addressing these questions?* Although these will be discussed below, the critical issue is *what do we actually do* with the answers to these questions.

Intelligence means addressing the broad range of challenges the holder(s) of the intelligence face: *Context* is fundamental. The particularities of the time and place, as well as the characteristics of the subject holding the intelligence, are varied, and the intelligence they hold varies also. The intelligence of a bee is different than that of a bear. And for humans, knowing how to keep warm and dry would have been uppermost in the minds of our distant ancestors while knowing how to drive safely at high speeds on a motorway is more relevant today – at least for many of us.

From basketball teams to multinational corporations and bee colonies, the multiplicity of ways that individuals and resources are linked together to coordinate activities is now increasingly being viewed as *collective intelligence*. It seems strange to me that there is no term in common usage that describes the collective capacity to address the critical problems we face, *equitably,* as well as effectively. Such a term would allow us to differentiate between the collective intelligence that was employed by health workers trying to prevent disease and that of an army invading a neighbouring country. I use the term *civic intelligence* for that purpose. Civic intelligence waxes and wanes over time, and varies in quantity and quality from setting to setting.

This general formulation in itself does not provide an answer. While civic intelligence is a descriptor for important social phenomena, in the context of liberating education for the future, it serves mostly as a provocation or prompt, ideally an invitation and inspiration to educational communities (the WEIRD and the non-WEIRD ones alike) for school transformation, program development, and a focus for student research and projects. We are concentrating on a small number of primary constituents of the inquiry we are proposing: the environment we are working within (especially the challenges it provides), the intelligence we have and need; and the resources (people, computers, ideas, etc. etc.) that we can draw from, and those that we need to cultivate and build.

In a general way, the challenges facing humanity are contained within the idea of wicked problems. And the civic intelligence that we seem to be manifesting – in scattered, sometimes connected, locations – is not sufficient. And more of the intelligence we seem to have – or are testing for – and rewarding with pay checks and/or advanced degrees – is not the answer. If tomorrow, the IQ of everybody in the world had miraculously doubled overnight, I suspect that we would simply overreach our various tipping points sooner rather than later. The same goes for technology – simply getting more of it is not the answer – in fact it is often part of the problem.

We do not necessarily need a precise definition of civic intelligence. We do need to realize, however, that the intelligence we collectively need goes way beyond solving logical problems or having large vocabularies. Unfortunately, a commonly used concept for "measuring" intelligence (arriving at a number deemed an IQ) relies on solving those types of non-wicked problems. This view

also assumes that the "location", where intelligence resides, is solely within the brains of individuals, not groups, and neither other individuals, nor books, nor the internet, can be consulted when a person is taking a test that establishes their IQ – a very unusual situation to run across in the real world. And, of the highest implication for our purposes, no problem of any magnitude at all can be addressed satisfactorily by a single individual. The intelligence we are trying to cultivate must be *collective*, or group-based, in addition to individually focused.

8.1 Crisis of Civic Intelligence

It seems to be the case that active and abundant civic intelligence (to the degree that we can quantify this), is likely to engender more. The reverse also seems to hold: if civic ignorance is thriving, it is likely to engender more of it, and with higher potency. Unfortunately, it appears that is easier to grow civic ignorance than it is to grow civic intelligence. As has been noted (and attributed to many), "any fool can burn a barn down". This very rough relationship highlights the possibility that there may be tipping points in relation to civic intelligence – and to civic ignorance as well.

Do we have "enough" civic intelligence? As we have observed, intelligence is contextual and it is "measured" (or assessed) by its ability to address challenges that are appropriate to the environment it lives within. It can be measured artificially (by proxy), as with an IQ test, e. g. or naturally via its day-to-day interactions, as well as its extraordinary encounters and challenges. To some degree, intelligence can be seen as the ability to notice (and understand to an appropriate degree) challenges and to take appropriate action. The more severe the challenge, the more important the ability to take appropriate action becomes. If the challenges are growing (in number, magnitude, speed, proximity to tipping points, etc.) and the potential severity of the effects of the challenges is also growing, the civic intelligence that is needed to address them must also grow. If the risks being encountered are becoming more severe and are outstripping our ability to mitigate or prevent them, a crisis of civic intelligence exists. Unfortunately, we do not know with any precision where we are now, nor what the trajectory looks like. Nor, of course, do we know whether we have the collective wherewithal we need to intelligently navigate our way down alternative, less perilous, paths.

Many of the problems we face can be traced back to inadequate civic intelligence. This is especially visible during elections in which candidates can ascend to power purely on the volume and repetition of their untrue and unrealistic claims. It also shows up less visibly when people's belief systems change. This can have disastrous consequences, when, for example, people become climate change deniers. Unfortunately, these changes may be the result of disinformation campaigns waged by well-paid public relations professionals (Proctor & Schiebinger,

2008) using the same approaches as those used in the campaign to prevent health warnings on cigarettes. All of this suggests that addressing the problem of threatened and degraded civic intelligence (i. e. civic ignorance) is necessarily a consideration for the development of new, more challenge-aware educational systems. And although empires throughout history have collapsed more frequently than generally acknowledged (Motesharrei, Rivas & Kalnay, 2014; Tainter, 1988) and wars routinely erupt, killing people and poisoning the environment, people seem to be in denial: *It can't happen here*. And the breadth and depth of destruction that we might see in the near future may be magnitudes greater that what has happened historically.

What has been alluded to but not discussed is the unfortunate fact that civic intelligence itself is under attack. One common attack is to target institutions such as schools that intentionally foster democracy and critical thinking. Another is attacking institutions whose role includes safeguarding against corruption, such as independent watchdog agencies, news media, or the judiciary. Another is preventing information or knowledge that threatens powerful interests from coming to light. For example, in the United States, the Trump administration removed all climate change information from federal websites and instructed officials to shred or, actually, burn documents from the United States Agency for International Development (USAID) which it dismantled during the first week of Trump's second presidency. Prior to that, in 1995, the Office of Technology Assessment, a bi-partisan research agency created to supply information on new technology to congress, was defunded, ostensibly to reduce the size of government. And looking into gun violence as a public health issue was not funded from 1997-2018 because of an amendment to a bill that the National Rifle Association lobbied for.

Simple ignorance is one thing, and it can sometimes be easily remedied. But, civic ignorance, like civic intelligence, is complex, ubiquitous, adaptive, dynamic, and resilient. Unfortunately, today's civic ignorance often takes more virulent turns beyond just bending facts here and there. It often takes severe and drastic forms, encouraging inequality and oppression. And it can result in wholesale historical, linguistic, or cultural erasure. This involves turning hatred into a core belief that is directed at specific individuals or entire classes of people, such as immigrants, sexual or gender minorities, or religious groups. This makes the venture we are discussing more difficult – and, even, depending on timing and location, dangerous.

Thinking about civic ignorance as an active force has several advantages. Similarly with our inquiry into civic intelligence, we ask the questions about how civic ignorance is propagated, how is it produced and who is likely to consume – and how is it institutionalized. *Agnotology*, the study of ignorance in society – with a special focus on intentional and professional, funded ignorance – is another concept of somewhat recent coinage (1992 to be exact, see Proctor & Schiebinger,

2008). The phenomenon it describes is, of course, not new, but like the concept of wicked problems, its newfound popularity is significant in today's world. Its explosive growth, deep reach, and computability present ample opportunities for obstructing progress. In addition to encouraging odd, hateful, and dangerous ideas, a common by-product of weaponized ignorance is a widespread tendency for people to disbelieve everything. Weaponized civic ignorance makes it more difficult to see truth bobbing in a swirling sea of non-truths.

If civic intelligence is to be marshaled against wicked problems, it must take into account that civic ignorance may be the deeper engine behind the ubiquity and durability of wicked problems. For one thing, it helps us address the question of why humans often do not learn from history. Clinging to civic ignorance in spite of all evidence to the contrary, reminds us that one of education's implicit articles of faith is that knowledge, logic, and rationality will prevail. And, while it is true that people change their minds from time to time, it is clear that the existence of logical arguments and solid evidence alone will not change minds. Needless to say, dealing with the enemy of civic intelligence, civic ignorance, is itself a wicked problem, and being mindful of that extra confounding dimension is a necessary consideration within our pursuit of more empowering and liberating voices at school.

Acknowledging the wicked problems of the world and the fact that civic intelligence is needed to address them are the key elements of my argument. We could leave this solely as an academic question and discuss, assess, and debate it while the waters rise and voters choose climate change deniers to lead them. Or we could subject it to scholarly inquiry while taking action in the "real world" at the same time. We could examine our civic intelligence and take measures that were most likely to improve it. Making changes in the real world is not solely a cognitive undertaking. It involves finding resources, working with people, possessing self-efficacy, motivation, etc. etc. etc. as well as actually taking action.

9 The Liberating Voices Pattern Language

The *Liberating Voices* pattern language project, as you may know, inspired this book – but it was the spirit of that work that helped bring this into being, not necessarily the approach that was taken (a pattern and pattern language focus) or any of the individual patterns within the pattern *language*.

But the patterns within the language do provide insights or important prompts for reflection and for action. The pattern language approach is one way to incorporate a variety of complementary ideas, suggestions, and evidence into a coherent collection; the individual pieces are the "patterns" and the curated collection of these patterns is a pattern *language*. It is called a language because the elements within it are intended to be used with one another, as a spoken

language contains words that are used with one another to help formulate meaningful recording and sharing of ideas. In *Liberating Voices*, as well as within other pattern languages, it begins with the biggest or most general pattern, which in this case is *Civic Intelligence* and while many end with the "smallest" or most specific, Liberating Voices ends with *Retreat and Reflection*, which acts as the necessary complement, a bookend to the collection of patterns, which is to remind us, that inaction can be an important part of action.

Even though I assume that ambiguity is inherent in all languages, the two words, "Liberating Voices", can be parsed in two different ways, both of which are relevant here. With one interpretation, there are *voices* that are themselves *liberating* – where *liberating* is the adjective describing the noun, *voices*. The second interpretation focuses on action, the verb of *liberating*, helping to liberate voices that are not fully free. This feature helps to illustrate how the patterns in the pattern language described below as well as the aims and intents of this book. And although this chapter is not focused on the *patterns* in the *Liberating Voices* pattern language, several patterns within that language, such as *Community Inquiry*, *Experimental School*, and *Teaching to Transgress*, do have particular relevance here.

10 Liberating Voices in (inside and outside of) School

If we were to imagine that we had a clean slate to design societies and cultures that could actually slow down or stop our march towards oblivion, we would presumably end up with different systems than the ones we have now. But while thought experiments of this type can be valuable, there are several reasons reality should not be overlooked – especially if they obscure our ability to see and think about the present. First, of course, this ideal process assumes that those with power, global or localized, would be prevented from putting their thumbs on the scale. Second, we know that no two of the ideal designs would be identical. Third, there are no plausible or realistic end-goals. They simply cannot be precisely stipulated; we do not know what this idealized society should actually look like. Finally, any design would need to be contextualized. There is no one size that would fit all. This is not to prevent us from thinking big, imagining societies in which inhabitants are more respectful of each other and the natural world, only that, at the end of day, we must be able to get there from here, the shape of future education will necessarily grow from the seeds available, however unimpressive they might seem to be. These are the seeds that we need to nurture now. They may be hard to see because they are not dominant. They might exist as small, barely visible counter currents, but they do exist. The truth is that designing such an educational system is a wicked problem.

11 Why Seeds?

Although the idea of seeds seems central to this argument, seeds are not an exact analogue. For one thing, the "seeds" we are conceiving do not share a basic physical structure like biological seeds. Ours are more abstract and squishier. But, like the seeds that turn into plants, our "seeds" are also transformative. The essence of the seed is an idea (much like the patterns from the *Liberating Voices* pattern language whose name and theme were adopted for this book). Our seeds need an environment in which they can thrive and produce outcomes, the products that the seeds give rise to. These "seeds" will engage small (and not so small) clusters of people, the various agents who use them, and they will continue to exist in the projects, manifestos, or lesson plans that the agents produce. All of these seeds are intended to "grow" in many ways, they evolve over time, but not only after generations upon generations like the seed of a bush or tree. They will not fulfill their potential without purposeful cultivation. And, ideally, as the plants that grew from the seeds also create new seeds, our seeds must do likewise. But it is also due to the inherent connotation that this analogy is so important: seeds are encapsulated *life* and other words like, *foundation*, would not work since foundations are static.

The fact that seeds are not independent entities also supports our choice of analogy. Seeds, when they are in the hands of humans, are gathered, planted, cultivated. Some are chosen for some environments and not for others. Both types of seeds are selected and used purposefully. For our purposes, the seeds we need support both thinking and acting, and growing and learning over time. They also support creating new *habits* about growing and learning (and unlearning or refashioning existing ones) via reflection, evaluation, and metacognition. Done right, our seeds will encourage thinking that promotes *action* and action that promotes *thinking*. And the seeds themselves are not reasoning or principled but the people who plant them are – or should be. And the people who work with these "seeds" can devise new ways of sponsoring more collaborative and ameliorative learning and acting. When they create new seeds, modify existing ones, combine them, they become agents in the "evolution" of the seed.

Civic intelligence in the educational settings we are envisioning, should become the central seed, while the soil surrounding the seed, its environment and context, which includes norms and values, institutions, laws, culture and classroom – and beyond – of that setting, must also be considered. And any given seed is just one part of an ecosystem; and individuals, groups, ideas, projects, are also seeds – as well as specific educational practices. How are the seeds packaged? How do we spread them? Through communication and institutionalization – and via the products we create – and, of course, via our students who

will go on to other things, hopefully bringing with them the seeds that they have explored and employed.

12 Civic Intelligence at the Evergreen State College

As an undergraduate in the 1970's I had the benefit of attending The Evergreen State College, one of the few alternative or experimental colleges in the United States. I returned in 1996 to teach at Evergreen until I retired in 2017. There was (and, presumably, still is) an amazing amount of fascinating work being done at Evergreen – often project based and community based. While there as a student and, years later, as a faculty member, I was informed by many other Evergreen faculty members and students. In my first year at Evergreen I attended a program called *Towards Humane Technospheres*, which provided a thematic focus that became central to my work for 40 years. Along with Richard Alexander, a comparative literature scholar, and John Filmer, an engineer, Rob Knapp, a physicist, was one of the three faculty members teaching the program and I am happy to say that he has contributed a chapter to this book. Lin Nelson, another retired Evergreen faculty member who was also a strong inspiration for me also has contributed a chapter. Lin worked with students and other faculty members closely with marginalized and neglected communities such as those living near smelters and abandoned toxic industrial sites. Lin also worked to help institutionalize educational approaches at Evergreen and without her efforts, there would presumably not be a Center for Community Based Learning and Action at Evergreen.

I focus on my own involvement around the idea of civic intelligence at Evergreen in this chapter, not necessarily because my approach was unique at Evergreen (it was not) but because I am naturally most acquainted with my own work. Evergreen's philosophy is exceptionally encouraging of civic intelligence in a general way (although the term is not in common use) and any number of other faculty members there promoted civic intelligence through their classes, whether they were teaching archeology, computer science, history, literature, media, the sciences, or just about any topic one might name. I should also mention here that I had considerable freedom at Evergreen in what I taught and how I went about it. The Evergreen environment, with respect to teaching, is not common and I realize that this was a luxury that many do not share. I do not expect others to be able to adopt the ideas in this book easily. On the other hand, all schools have rules and norms, formal, informal, or tacit, that make some things easier to do and some things more difficult.

It was only after I had been teaching at Evergreen for several years, that I identified the idea of civic intelligence as being absolutely central in my work inside and outside of Evergreen. At that time, I committed to that focus (and would

appear in the title of every program I taught). Before I retired some 10 years later (and became a RINO – r*etired in name only*) I taught with political scientists, theater professionals, public health / medical professionals, librarians, philosophers, and others. While anecdotal, I will say that many of former students consciously put into practice many of the concepts related to civic intelligence in their post-Evergreen trajectories, such as Native education, police work (currently a commander in local police), civic affairs (the current mayor of Olympia, Washington), as well as involvement in public health, public media, and nonprofit sectors. To illustrate this focus on civic intelligence, I will discuss a civic intelligence framework and, briefly, the Civic Intelligence Research and Action Lab (CIRAL) venue that my students and I organized and conducted.

13 Civic Intelligence Framework

I found that having students focusing explicitly on the idea of civic intelligence was a useful way to help us collectively explore the concept while engaging students in the practice of civic intelligence. While admittedly, a precise, exact formal testable definition of civic intelligence is not possible (and if it were, the concept would be less useful) it does lend itself to fruitful work including having students help determine the trajectory of study. Students in my classes, for example, early on, became weary of my use of the term "civic intelligence" which, at the time, was largely built upon a notion, a fairly loose definition, and some examples. The question of what features were necessary or useful in understanding civic intelligence – or using it – had not been explored in a focused, sustained way. They were interested in improving their own civic intelligence. They also wanted to use it as a way to assess the civic intelligence of other projects, actual or envisioned. Asking these types of questions is an essential aspect of civic intelligence and, ideally, of education in general, especially institutions whose mission statement includes a commitment to the common good. And the idea of using student-originated questions as the inspiration for sustained collective enterprises, while rare, is also critical for educating for civic intelligence.

So, based on these questions and the need to address them, we launched a thread on that topic for the class that commenced the following quarter. During that quarter we spent considerable time in and outside of class developing a taxonomy that we believed included the core aspects of civic intelligence. We discussed the project the first class session and students brought in their initial thoughts for features that they thought belonged in framework for the second session. Over the course of the term, the proposed features were considered, debated, modified, combined, or deleted. Rather than creating simply a laundry list of features, we came up with five categories (below) that seemed to cover the field and, under which, each feature seemed naturally to fit. The process and

rationale for the project, as well as the categories and features are presented in more detail in "Pieces of civic intelligence" (Schuler 2014).

- *Knowledge*; including a variety of knowledge-based capacities such as knowledge of problems, theoretical and practical skills, tacit knowledge, knowledge about resources, self-knowledge and metacognition (the ability to think about one's own thinking);
- *Attitude and Aspiration*; including a variety of capacities that are typically seen as non-cognitive but are essential for civic intelligence such as values, civic purpose, motivation, and self-efficacy;
- *Organizational Capital*; including the processes and structure of the collectivity that are needed to complete tasks effectively, such as personnel, work practices, and access to resources;
- *Relational and Social Capital*; including reputation, social networks, social capital, opportunities; and
- *Financial, Material and Immaterial Resources*; including time and attention, buildings, land, and the like – as well as the perennial focus on money.

We came to believe that that drawing from all five categories would be necessary for any significant civically intelligent enterprise. For example, group skills are absolutely critical in any project, but they by themselves would not be adequate without knowledge of the problem the group wanted to address and adequate resources to conduct the campaign they planned. On the other hand, the knowledge category, is often given more attention and status than the others in higher education. In our approach we decided to err on the side of too many features, rather than too few. We were definitely not looking for the one feature that would sum it all up, being of the belief that no such feature existed. This work can be seen in contrast between the IQ-oriented approach discussed earlier and the multiplicity of actual features within civic intelligence. Courage, for example, is not likely to factor into an IQ test yet it often plays an important role in social change activism, such as registering black voters in the United States in the 1960s, within an overtly hostile environment. And, for example, in building resilience via community development, values and civic purpose are critical and are also present in the relational and social capital categories and through metacognition.

In a subsequent term students used the framework we had developed to create a survey for determining and ranking the civic intelligence of colleges and universities in the United States. We also investigated how the notable and much-used ranking schemes to determine the "best colleges" were constructed – in ways that were often tied to economic class – and how colleges changed superficial characteristics in order to garner higher scores in various ways (e. g. striving for a higher applicant rate which could yield them a higher rejection rate). The assignment which built upon our prior work, succeeded on several levels. Firstly, we learned

firsthand about developing a tool for social science research. By actually using an instrument that we had developed to examine civic intelligence we saw the utility of such an instrument which helped demonstrate the value of our work, while strengthening our research capabilities. Secondly, it helped us understand more about how social instruments play out in the real-world and how they are – and can be – used. Thirdly, and perhaps most importantly, we learned more about civic intelligence in a very broad way.

In fact, this focused investigation of civic intelligence in a specific setting would, like the framework development process, make a very good project for any project that educators might develop in relation to liberating voices at school. By the same token, this liberating voices at school community could use a similar approach to examining itself or the changes we would like to see using something along these lines. Unfortunately, no college or other school – as far as we know – has actually been assessed using our survey, This opportunity to use the survey in this way is still out there and it would be valuable in this context since it helps highlight important differences between education as it exists and envisioned approaches to education that are specifically intended to foster civic intelligence.

Clearly, assuming that some of the elements are useful aspects of civic intelligence, the question of how they can be internalized by students (or anybody interested in inquiry and learning) arises. Clearly that cannot be conveyed solely through instruction. Working collaboratively on a shared intellectual project is at the heart of many of the projects addressing wicked problems must face. The framework that we developed could be used by students around the world; as something to critique, examine, test, and modify. What might they come up with it to improve their self-efficacy in a world that does not always value this? How would they reflect on their experience? While the features are useful, they are not necessarily authoritative or comprehensive. But they can be used as a starting point for a discussion. Moreover, the taxonomy of civic intelligence enablers could be useful in assessing our own efforts in the Liberating Voices for Schools effort – and how we decide to pursue our aspirations collectively. It could also form the basis of a handbook, curriculum – or within a new educational setting, such as an ongoing research and action lab similar to the one discussed in the next section.

14 Civic Intelligence Research and Action Laboratory

The Civic Intelligence Research and Action Lab (CIRAL), a venue for understanding and improving civic intelligence in an educational setting also owes its existence to an assignment whose primary aim was furthering civic intelligence. Working in teams, the students were to devise a proposal for improving the civic

intelligence of the Evergreen State College in some way. After I had given it to them it occurred to me that I might also work on that – and the CIRAL concept was the result. I think I would grade my proposal somewhat favorably (although Evergreen does not have grades) because it helped to institutionalize and advance the civic intelligence perspective that persisted for several years. While CIRAL resulted in a number of innovative products, I believe, it was the many students who were encouraged to cultivate and maintain a civic intelligence perspective after they had left CIRAL, that was its highest achievement.

Although I came up with the original concept – a seed, the students from the start were the primary (but not sole) instigators of our guidelines and purpose. Early on, it was decided that students would form issue or problem clusters composed of at least three students who would design and undertake projects that incorporated research and action in that area. Individual projects were not allowed but suggestions from individuals were key. We had regular weekly meetings, self-governance was the norm, and the projects were sustained to the degree possible over time: I agreed that I would be supporting this every quarter until I retired and students they could enroll as often as they liked – and a faculty member even attended for two quarters. Pedagogically we were all over the map: Evergreen homelessness census (which was incorporated into the Olympia City report on homelessness), civic intelligence games, native kitchen project, radical bliss, student produced films, public forums, repairing the roof of the homeless shelter in Olympia, and installing solar panels on the roof of Evergreen's library. Some of the *Liberating Voices* patterns were in evidence: *Activist Road Trip*, *Everyday Heroism*, *Sense of Struggle*, *Strategic Frame*, *Mirror Institutions*, and the *Power of Story*, to name just a few.

During the years I orchestrated CIRAL, students would frequently talk about expanding it, adding nodes in other schools, for example, or starting a Research and Action Lab at the city level. Because the model itself is a seed, it can be made to fit within a narrow or broad framework. It could be done within just about any context, governmental, educational, community, for examples, and as a one-shot, sustaining, periodic, or ad-hoc. It would likely look different within an urban or rural context, or in an engineering school versus an art school. It could be different sizes. And, it could be federated, with different CIRAL nodes operating interdependently. And when I retired, there were efforts by the students to enlist people to keep it going. Students discussed it on the campus radio station, and they took their case to the dean. And although Evergreen professors are still engaged in civically intelligent projects in their classes, the projects are not necessarily connected to other efforts or sustained via any kind of institutionalization. Although CIRAL is no more, the idea is still out there, waited to be acted upon. But, of course, the CIRAL model is not unique. I presume that similar work is going on in other venues and comparing notes on these various approaches could be informative and inspiring.

15 Seed Catalog: Nuts and Bolts and Utopian Visions

After reviewing the current state of wicked problems and civic intelligence, at Evergreen and beyond, a variety of important seeds for education emerge. Although these seeds are intended for groups within educational settings, they could also serve as food for thought for individuals as well, including people involved in their own education or informally within a community, whether it is WEIRD or not.

15.1 Purposeful

The work should be explicitly purposeful. This rules out that rely on side effects or other under-interrogated, ambiguous, and implicit beliefs. It also rules out "solutions" in search of problems, such as the "free market" or AI.

Let students know that this work matters – it is not *academic* in the pedantic sense. The goal is addressing challenges. This can mean building community, solidarity, or strengthening other features that may be necessary when trying to swim against the currents. And if there is question of whether a *moral* or *qualitative* dimension is necessary, everything suggests *yes*, regardless of the empirical or theoretical challenges. The idea of "solving" issues such as climate change, environmental destruction, or nuclear war, without an ethical, moral, or other humanistic dimensions, is absurd. These are not technical problems with instrumental efficient resolutions and any attempt to see them as such is almost guaranteed to fail. It is like constructing a ladder to the moon: one cannot get there from here. And because no problem of any significance is ever totally "solved", an important goal is improving the ability and the desire to address challenges over time, to instill the civic intelligence gene.

15.2 Student(s)-centric

The overriding purpose of education is preparing people for the future. The program should be tailored to students needs and values – but not dictated solely by them.

Although the need for teachers and other mentors still exists, students should be active in the development of the principles, covenants, guiding questions, and research questions, that the program is built upon. Students should have ample choice and be involved in co-teaching, including group learning and interactions. Focusing on the student's experience and the value that they place on the education they experience provides the best assurance of the student's interest in building on the work of the program as they continue their life afterwards.

15.3 Community Focus

Focusing on community both within – and outside of – the educational institution is critical. Focusing within helps build solidarity, resilience, and effectiveness, but the real needs of communities outside of the educational context, should be the primary focus.

Although individual learning (and autonomy) is a primary objective, focusing on group learning is also critical. I also argue that doing things in groups, if done well, should be liberatory and empowering for the individual. And, the community focus outside the group integrates the non-school ("real world") arena where the wicked problems to be faced take on additional wicked proportions, an arena where critical co-learning can occur.

15.4 Experimental

People experiment in order to test theories. And developing, testing, and evaluating theories are excellent ways to learn about theories.

Thinking of the program as an experiment and as a Petri dish of multiple, ongoing experiments, acknowledges that the program is a work in progress, it has fluidity and it can be changed – and students themselves can be active influencers in terms of where it goes. A focus on experimentation brings several concepts to the fore: knowledge seeking, hypothesizing, attentive observing, and metacognition to name a few.

Experiments should be considered both within the program itself – with an eye towards its improvement – and in relation to the outputs / products of the program: What did we expect to achieve (and for what reasons) and what did we actually achieve (and for what reasons)? And because care should be taken to note relevant factors in the experiment, it becomes, potentially, more easily shared with stakeholders during all phases, from experimental design, evidence gathering, to focused discussion, and identification of next steps. The sharing of evidence and what could be done with it could lead to conferences, debates, regular discussions, and future experiments. Establishing this focus with students will help instill important perspectives as to how they think about the program. Moreover, examining the elements of the process, many of which will be tacit, will help them, not just in working within the program, but in conceptualizing (and re conceptualizing) their work as they proceed after the program.

Because there is no one best approach and because different contexts require different approaches and because things change, the program should be built to

evolve. The Experimental seed should help stakeholders (administration, faculty, students, and community members) discuss and plan (through the explicit and tacit and potential dimensions of the experiments) so the program can grow, adapt, and change. *What effects might different meeting space arrangements – or locations – have on outcomes? What's lost of gained with adding nodes to the network? What are the best sizes for different types of groups, what features from the Civic Intelligence Framework are most important – and why –* or *how do we assess and improve the various features, etc.?*

15.5 Integrative

The *integration* of thinking and acting is central to this work. But, given its nature, integration and mutually informing of other pairings, bringing diverse elements together, is vital. This work does not settle in one domain or discipline, nor does it involve a singular and unchanging set of actors, resources, and challenges. It, inherently and consciously must seek a diversity of students, who may ultimately work across disciplinary lines, with experts and laypeople, scientists, artists and musicians, specialists and bricoleurs.

By bringing together a diverse group of institutions and stakeholders to help address multiple needs simultaneously, the Sustainability in Prisons Project (SPP), a long-running partnership with Evergreen and Washington State Department of Corrections, provides an excellent example of the Integrative seed. Their broad mission statement, to "empower sustainable change by bringing nature, science, and environmental education into prisons" has motivated wide-ranging, creative projects. For example, since 2011, incarcerated "butterfly technicians" and community and government partners raised and released over 60,000 butterflies that are on the federally endangered list to help restore lowland prairies. And in 2024, 82 incarcerated people from Washington state prisons, earned college credits from Evergreen with SPP programs. SPP participants have been involved with a number of partners to improve gardening education and access to fresh produce; over the last fifteen years, the eleven Washington State prisons raised nearly 300,000 pounds of produce and donated over 110,000 pounds to food banks.

Research, which is any quest for understanding, from observing to developing scholarly theories, can be pointless without action. While, at the same time, action without research can be ineffective or, at the worst, counter-productive. The artful integration of thought and action, and bringing together any number of seeming dichotomies that are not always seen as relevant, is challenging but necessary.

15.6 Transcendent

Focus on the things that are being worked on or are being considered at any given time. But keep in mind that there is always a next step, phase, or level, and it might not be the one that was expected. The work is continuous – and it can turn out to be more than what it seems it is.

This work requires both research and action that transcends the here and now. This seed makes the case for open-ended and critical explorations. The *Liberating Voices* pattern *Activist Road Trip* is just one example of an activity that sets up opportunities for wide-reaching inquiries that push the boundaries. And simply changing the meeting space or inviting new people in can set up new ideas or trajectories. Considering the question of *And then….?* should be an operating principle. The work should always be considered as something that leads to something else. It is *generative*.

It is this seed (and the Purposeful Seed) that establish the need for working against the status quo, for veering off the well-worn, traditional, orthodox, and sometimes coercive paths. Unfortunately, it is well established that people are (relatively) free to engage in cleaning up the messes that others have caused, but thinking of ways to prevent the messes from getting out of hand in the first place, is often another matter altogether. Thus, to accomplish what we hope to accomplish, our work must sometimes also be transgressive. Cleaning up after an oil spill may be seen as good, perhaps even noble, but working to enact legislation that would make the spills less likely could very well be seen as forbidden.

When students are able to transcend the boundary between student and teacher, they can take ownership of the program, they become more aware of their own abilities, their feelings of autonomy (freedom from inertia) and self-efficacy (feelings of empowerment and personal capacities) grow; their potential for making change also increases, thus transcending the too-common feeling of helplessness. This helps instill the freedom to have ideas, pose questions, develop hypotheses, and look for answers. Hence, the liberation of voices accompanies the burden of responsibility.

This seed helps emphasize the roles of arts, crafts, rituals, festivals, and any number of things that do not easily succumb to analysis or the rules of logic. They are vital is many ways. It is this seed which encourages the creation of new worlds, the exploration (and creation) of alternative narratives, expressing vitality, hope, solidarity, and self actualization. Gramsci famously noted that two seemingly distinct perspectives are required for this work: *pessimism of the intellect and optimism of the will*. That is, while we fully appreciate the durability and magnitude of the challenges, we can also see the small light of hope that flickers, but does not extinguish.

15.7 Productive and Meaningful

Work has value when what it produces is meaningful. Ideally this means that the effort put into the work as well as the output of the work is meaningful to the people who produced it and to the community for which it is intended.

For the program to have meaning it must be educational; students must learn important, practical and conceptual, ideas, skills, and perspectives. Ideally, the program builds organizational efficacy and resilience. It should be increasingly productive for the long haul, with more positive outcomes, increased competence, and sustaining projects. Goals that have potential to influence, to make a difference. One example of this is sharing useful products –within and outside the program. Becoming productive can include attitudinal adjustments, in dealing with overwhelming immensity without getting overwhelmed as well as understanding (to the degree possible) the challenges – including civic ignorance.

15.8 Thoughtful

Thinking is a critical element throughout all phases of this work.

Ask questions – and keep them present, throughout the work. It is not always obvious that asking is a form of freedom. It is – or at least can be – empowering as well, since asking is often a first step towards better understanding. Thinking takes different forms, including reflective, evaluative, learning and coming up with ideas, small, as well as big. Metacognition, thinking about one‘s thinking, is critical, as is querying one‘s own knowledge base or assumptions is especially important with this type of program, with the types of challenges they are meant to address.

In the broad discussion of civic intelligence versus civic ignorance, one of the worst conclusions that could be drawn, perhaps actually the worse possible conclusion. is the idea that “our” enterprise (working for positive social and environmental outcomes) is intelligent and “their” enterprise is ignorant. Obviously, this can be the case, but this perspective is at the heart of many of humankind‘s most civically ignorant enterprises – and we must not fall prey.

And, speaking of civic intelligence, with its multifaceted aspects and the difficulty, if not impossibility of accurate measurement, we should, again, question the idea of grades. To cite Evergreen yet again, students are not graded per se, but are provided with narrative evaluations written by their faculty members – who, in turn, receive narrative evaluations written by their students. For many reasons, going up against this deeply ingrained habit may be too palpable and unyielding to be considered, but there may be ways this could be approximated. (And group evaluations may also be appropriate.)

15.9 Incentivized

Working explicitly for the common good is meritorious but students still need to eat and to live in the world.

Although this work cannot promise that it will be the most remunerative work to be found, students must feel rewarded to some degree for their efforts, within the program and post-program, outside, in the "real world". Without this, the program will not succeed. As educators we can issue credits, degrees, certificates, commendations, and possibly, even employment. The world outside must also incentivize this work. It may be useful to keep the local media informed about the work. If the work is recognized and rewarded by the outside world, the educational institution and the community at large will also benefit – as well as to students. Ideally, having been involved in such a program would make graduates desirable for jobs they might have available. The institution should communicate with businesses, non-profit organizations, and civic institutions about the importance of the work and the skills that the students are learning. Some organizations need these students more than others and we need to be sure that we are letting them know that we exist. Finally, of course, the program itself can be rewarding. All parties involved, from educators and administrators to students should be encouraged and encouraging.

15.10 Infrastructure/System Support

Improvising and striking out into the unknown have their virtues, but why reinvent the wheel over and over again. Ultimately, these programs must have somewhat formalized, reliable, functions and services to keep them from overburdened with tasks that can be more easily and effectively accomplished elsewhere. (Although they should not be seen as eternal and non-changing, since adaptability and openness to conscious evolution are inherent to the program.)

The programs we establish can clearly benefit from infrastructure and system support. They do not exist in vacuums. But what support is needed? Access to resources such as research, people, opportunities, meeting space, Grants, money for start-ups, technology and administrative support, all come to mind, as well as public relations to the outside world. Some of this work can be supported via allied institutions within the school. In the US, this often takes the form of Institutes or Centers. At Evergreen, the Center for Community-Based Learning and Action (CCBLA) offers a variety of allied projects including a Basic Needs Center, Campus Food Bank, Community-Based Learning Opportunities, Farmworker Justice Day, Civic Engagement, and Experiential Learning and often partners with academic programs.

Even a single class could benefit from infrastructure / system support. Perhaps a minimum of 10 % of the student effort should go into infrastructure support for the program. Within CIRAL, this support was basically provided by the "Home Office" cluster, whose job it was to facilitate our weekly meetings, publish a weekly newsletter, and perform other tasks that they or others in the program had determined to be useful.

Sometimes it may look as if the infrastructure we need is not available. In this case one may need to look for the loopholes. At Evergreen, it was the undergraduate research category, designed originally so small numbers of students could work on experiments with the science faculty. I am not sure that having 10–20 students signing up for it every quarter, was what they had in mind originally, but it worked for our purposes.

15.11 Perspiration

Thomas Edison's observation that "Genius is one percent inspiration and ninety-nine percent perspiration" reminds us that even the best ideas are not likely to go anywhere without substantial effort. One extraordinary example of this comes to mind. One person, Raphael Lemkin, a Polish lawyer, coined the term "genocide" in 1944 and after decades of campaigning, the United Nations established the Genocide Convention, which legally defines the act and codifies it as a crime.

There is a big difference between a utopian manifesto that is simply wishful thinking and one that has some power, however limited. What is the difference between a pipe dream and a useful program? Persistence. It is not likely to happen, without people making it happen and staying with it. Educating for liberating voices is likely to require swimming upstream and blazing new paths. It may also mean shaking our fists, as well as actually walking the walk – in addition to the standard scholarly activities such as researching, musing, and theorizing.

16 The Garden

Sooner or later, the needs, seeds, aspirations, and recommendations that we are considering must be transformed into educational practice. If nothing happens in the actual world, the exercise becomes mere rhetoric. There is, of course, the practical issue of what a teacher can actually accomplish in a classroom or other venue where exploration and learning can occur. What is done in the classroom, what is in the curriculum, the canon, research objectives, educational policies, community factors, collaborative potential, and research dollars can provide opportunity spaces (Schuler, 2008) for improving civic intelligence, even if limited.

The following sketch of a plan describes one way to go about building educational processes that support liberating voices at school, a garden of sorts, using the eleven seeds discussed above. This general plan, fleshed out with the appropriate seeds of the previous section adopted for the local environment could serve as a first rough cut.

1. Integrate theory and practice. Use wicked problems and civic intelligence as themes or topics and use case studies that show examples.
2. Use a lab-based, collective approach, that is sustainable and evolves over time, with guidelines and focus on student leadership and governance.
3. Enhance with research, theory, discussion, evidence, and data as appropriate. Some of the needs for these can be anticipated and some can – and will – arise during the course. Much of this work will fall to the teacher, but students also will have knowledge to share, and they can certainly request help in this area from teachers and beyond.
4. Work on a variety of projects, but maintain to the degree possible, cohesion and collective ownership of the lab.

These ideas can help get a lab launched. This work acknowledges that we all can influence the future. The fact that responsibility grows power means that students have power – but not control. It also helps dissolve any designation of students as less-than or unworthy of education. While the students will not have absolute power, neither do the teachers, whether formal or informal. Nevertheless, we can make it easier to assist both in the creation of a new, more humane and sustainable world.

17 What's Next?

As various environmental tipping points loom closer, institutions fail to engage meaningfully with these issues, and citizens are inactive and allow authoritarian rulers to oversee and encourage oppression and corruption, the warning signs are – or should be – impossible to ignore. The need for re-orienting our educational approaches is becoming more acute. Unfortunately acknowledging that is only one step in a fairly difficult undertaking that must take hold in a great number of places to make any meaningful impact globally. (And, needless to say, these places must include WEIRD and non-WEIRD communities and institutions). The immensity of the project compels us to think beyond individual classrooms, programs, schools, etc. and imagine ways to build larger configurations more intelligently, that are not hierarchical but adaptive and cooperative, perhaps through federation.

Unfortunately, many of the standard practices of education do not support this work: Grading individuals, standardized rote learning, creating a class of left-behinds, not encouraging personal initiative, creativity, etc. are the norms in many places. Just as too rigid or under interrogated versions of intelligence can hamper real progress, the same applies to our educational systems. And if our vision of collective intelligence is solely directed at elite (WEIRD) institutionalized educational settings, we limit our vision to a fraction of what collective intelligence might actually entail. A quick look at the attributes of civic intelligence that my students and I created will quickly illuminate other gaps in our educational practices.

The idea of identifying one single, correct answer, one approach, one perspective, or one overarching theory that explains everything is an academic's dream. It seems to be a holdover from the alchemists dream: Even though we have not been able to make it happen, *there ought to be a way to turn lead into gold.* Can we admit that to a large degree, the pursuit of the *one* way, is a dead end? But the opposite of the "one way" where our tools and perspectives must deal with unfathomable complexity is not the answer either. We know that everything is connected to everything else. Unfortunately, that fact might suggest that we have to know and do *everything*. Fortunately, we also know some things about the connections; namely that they are *not* random and that looking closely as them can reveal important, although often indirect, forces that maintain and accelerate the problems we face. This knowledge pares down the number of possible paths while also alerting us to the importance of ones we may have overlooked. With those qualifiers, Christopher Alexander's statement that in order to address something, however small, we are obligated to "repair the world around it" becomes more realistic. It changes what would be an overly demanding directive into a broad suggestion that it is *possible* to make some progress on our challenges. So, while we attempt to help cultivate educational processes that are more suitable for today's challenges, we must also change the world beyond those educational processes.

Raising the importance of these new approaches to education would not mean that we would require that every person receive the same education, but that all would have the opportunity (if not the obligation) to learn and think about their position in the world and learn various approaches for addressing collective needs – especially in working together in diversity. The American philosopher, John Dewey, over his 60+ year career, focused on a pragmatic philosophy related to actual social challenges, including the integration of millions of new citizens into the United States. It is not known (to me at least) whether he ever used the term "civic intelligence", although many people working in similar areas at the time did (e. g. City Club, 1911). His "democratic faith" quote prefigures and inspires the work of this chapter – and, I would suggest of this book:

> "While what we call intelligence may be distributed in unequal amounts, it is in the democratic faith that is sufficiently general so that each individual has something to contribute, and the value of each contribution can be assessed only as it entered into the final pooled intelligence constituted by the contributions of all."

Education is key to energizing Dewey's conception of the democratic faith. Let us, to the quickest degree possible, rekindle that conception and do what we need to do to realize that faith.

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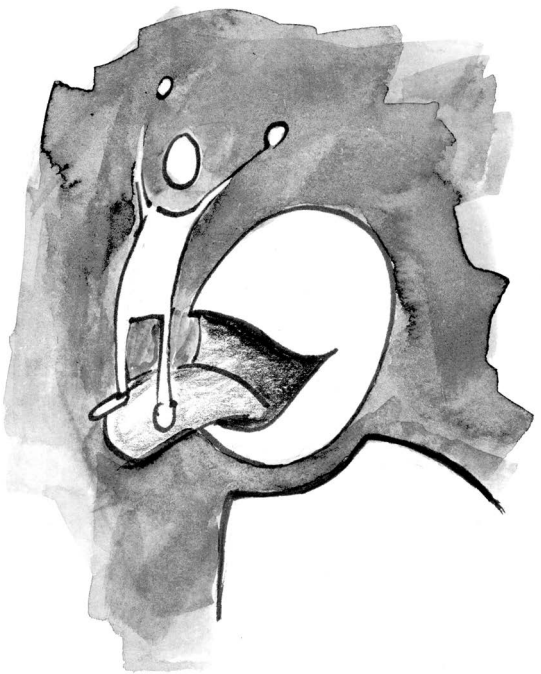
Part I | Enabling Didactics



Drawing by Stefanie Egger

Chapter 2 | Teaching Geese to Fly

Rob Knapp

Among the extensive works of Konrad Lorenz, the iconic Austrian scholar of animal behavior, is a poignant and inspiring short film which teachers at all levels can take to heart. This essay uses it as a reference point for a discussion of student-led direct engagement with real-world issues, based on existing, time-tested programs in the United States and Europe. The programs differ in many ways, but they all put students in charge of the key decisions and at the forefront of resulting actions.

The film came out of Lorenz's extensive studies of newly hatched geese. They very quickly identify their mother and thereafter observe and imitate everything she does. This 'imprinting' serves in the wild to connect offspring to mother in their early, vulnerable days. It has them imitating her in detail, walking right behind when she walks, pecking for food where she pecks, swimming in line behind her, hiding without moving when danger threatens, and so on. It is how geese learn about their world. They do not instinctively know what to do; they have to see it demonstrated.

Lorenz made the startling discovery that newly hatched geese imprint this way on anything of very roughly the right size, shape and movement they see right after emerging from the egg. This can include humans. He and his students used imprinting for extensive, fascinating experiments about how geese learn. There was an ethical challenge, though. If humans had managed through imprinting to get some geese to count on humans to show them everything important, what about learning to fly? Humans might be able to demonstrate everything else needed for survival, but not flying.

The short film shows Lorenz's response to this challenge (National Geographic Society, 1975). He leads his flock of young geese, by that point well grown, into a field that slopes gently downhill. He sets off at a run, stretches out his arms, and starts waving them up and down. The young geese follow suit. They run, they stretch their arms, they start waving them up and down – and they are flying. They pass Lorenz, fully airborne, and are off on their own.

These few seconds are an image of what education should be trying for. Just as those young geese are moving into a world which Lorenz the teacher is unable to enter, our students in this third decade of the 21st century are moving into a world which has already changed in profound ways from the world that formed us, a world which is headed for yet more radical changes.

How to prepare students for a future which their teachers do not fully or intuitively understand? It turns out that today's students by late teen age, like young

geese, have a good deal of the needed strengths and skills waiting for the right occasion and the right cues to come into play. This essay visits a number of existing school and university programs in which this happens. Each example will highlight important difficulties and ways they have been overcome.

1 A world unfamiliar to today's teachers

A good place to start is the headline for a recent opinion piece in *Nature,* the international science journal: "Educate parents about social media" (Campbell, 2025). Marilyn Campbell, the author, is an Australian professor of education mainly concerned about good ways to work on the bad effects of children's involvement in social media. Her preferred approach, as the headline indicates, is through parents. The headline also asserts, indirectly, that parents generally do not understand social media.

There is no doubt that social media are very recent arrivals in the world. According to Wikipedia, a good source for current trends,

> Popular social media platforms with over 100 million registered users include Twitter, Facebook, WeChat, ShareChat, Instagram, Pinterest, QZone, Weibo, VK, Tumblr, Baidu Tieba, Threads and LinkedIn. Depending on interpretation, other popular platforms that are sometimes referred to as social media services include YouTube, Letterboxd, QQ, Quora, Telegram, WhatsApp, Signal, LINE, Snapchat, Viber, Reddit, Discord, and TikTok.

This massive presence was simply not there when the bulk of teachers were acquiring their background knowledge and instincts about the world. In the US, only 15 % of state school teachers are under 30 years old; the median age is 42 (NTPS, 2017–18). College and University teaching staff are older – only 11 % under 30, 67 % over 40 (Zippia, 2025). While a good many have become users of social media, and some even experts at it, it is clear that this is a new world, not a familiar one, for teachers as a class.

Parallel explosive growth has occurred in artificial intelligence (AI). Its surge started about 10 years later than social media's, but if anything, it has grown faster and shows no sign of slowing. Impacts on school and university teaching and learning have been truly explosive over the past two years, since the launch of ChatGPT in December 2022 (Teubner et al., 2023). Myriad teaching staff have responded quickly, much to their credit. It may turn out that many of them can fly in this new environment, but the fact remains that this was no pre-existing ability. What they say and do with their students is co-learning, at best.

Several other sweeping developments in society distinguish the present generation of students from the generations which bore their teachers, certainly in

the US and likely very widely around the globe – climate change, the gig economy and related major shifts in the nature of work and availability of jobs, intensifying disputes over racial and social justice, smartphones and their influence on student mental health (Abi-Jaoude et al., 2020).

2 Legal aid clinic

The first case for consideration of student direct engagement is the Eagle Aid Clinic at Akins High School in Austin, Texas. Armin Salek, a young graduate of law school, had learned during his first year after graduating and gaining his attorney's license that the Akins school offered a program for familiarizing students with the legal system in general terms, and had a job opening in it. He was accepted, and soon found that his students responded very strongly to discussion of topics close to their lives, like immigration and family law.[1]

During his law school studies, Salek had learned about legal aid clinics, a long-standing presence in the US legal scene (Barry et al., 2000). The term "clinic" originates in medical practice, where it primarily refers to offices providing small therapeutic treatments to outpatients. Clinics do not typically do extensive laboratory or diagnostic work, nor do they carry out specialized procedures or procedures which call for extended care. Legal aid clinics have similar character. A person with a legal problem of modest scope comes for relatively brief consultation and advice.

Most legal systems include ways of providing legal aid, because of the widespread feeling that access to legal rights and remedies should be available in some fashion to people who cannot afford to pay lawyers. In practice this has often meant that aid is provided by trained non-lawyers under close supervision by a qualified lawyer. Why not, thought Salek, see what high school students could do, if given the right training and supervision? The result was Eagle Aid, started in 2017 and staffed by Akins students and himself.

The clinic ran until closed by the Covid pandemic[2] and was a success in two complementary ways. It provided hundreds of hours of free legal advice and assistance on immigration, family law, and related matters, and it provided the involved students with direct experience of real people's legal problems. This was experience impossible to get in normal classroom education.

A third dimension of success was that the students who gained this direct legal experience were much more from historically excluded groups than is usual

1 A general account of this work appears in (Ashoka, 2023), pp. 46 ff.

2 The Covid closure led to Salek leaving the school to get a Master's in Education, and then returning to Texas to found the Youth Justice Alliance (https://youthjusticealliance.org/), which aims to improve access to the legal system for people from historically excluded populations (Personal communication).

for conventional law clinics. Akins High School's students are 79 % Hispanic and 64 % from economically disadvantaged families. Law in the US is overwhelmingly a White profession, largely because legal education here does not occur until after four years of undergraduate study at a college or university. This has imposed significant financial, motivational, and cultural barriers. Akins had plenty of able students, but too often the four-year gap between high school and law school was too great for them to cross.

Work at Eagle Aid narrowed that gap by giving students familiarity with legal work, confidence in their abilities with it, and motivation to do it well. They were able to engage with problems which were familiar to them from their family and community backgrounds, and were able to provide real help with them. Salek observed that he knew plenty of students were unmotivated by grades, but none who were unwilling to help their community when given an opportunity to serve.[3] To some degree, in fact, their personal experiences and language capabilities were helpful beyond what a typical legal aid lawyer could do.

3 Prison work

A second example of engaging students directly in real-world situations where their contributions are essential has been playing out in prisons. *Gateways for Incarcerated Youth*, a program of Evergreen State College (Olympia, Washington), is now in its 29th year. Students from Evergreen's main campus in Olympia have an important part of their weekly class time inside a state prison for young offenders, Green Hill, which is about 35 miles away in Chehalis, Washington.[4,5]

Gateways was the creation of a committed and determined Evergreen faculty member, Carol Minugh, who was deeply concerned about young offenders. Confined in prison as teenagers, they lived in settings which did little or nothing to change the conditions, external or internal to them, which had culminated in their offenses, nor to give them skills or awareness usable for better histories after release. The official Washington State description of programs and facilities for

3 For useful additional background, see Amanda Robert. (December, 2023). *ABA Journal.* https://www.abajournal.com/web/article/armin-salek-builds-new-pathway-to-profession-for-aspiring-first-generation-lawyers

4 In keeping with the multiply unresolved nature of imprisonment in the US, several different names are in use for the sites—prison, detention center, correction center, and for juveniles, school or children's center. The difference in program, severity of conditions, and so forth are considerable, but since forced residence in a closed facility is the primary characteristic, I will use "prison" throughout, even though the State of Washington and other places have their own reasons for other names for sites housing people under 18 years of age.

5 Washington State's official description of Green Hill is at https://www.dcyf.wa.gov/services/juvenile-rehabilitation/green-hill. In some years, *Gateways* has connected with a second nearby prison for young offenders, Maple Lane.

youth offenders paints a different picture, but before *Gateways*, time at Green Hill was followed, all too often, by fresh offenses, community violence and further incarceration.

Minugh's insights were several: involving imprisoned young people in meaningful choices about the content of their education would have transformative effect; regular Evergreen students would gain and contribute significantly by sharing class time and contact with young offenders; and Evergreen's unusual structure and practices gave her the flexibility to design a course that could achieve these things.

All three insights need explaining. The academic year 2023–24 is representative. Minugh has retired, but the program has continued in the general form she initiated. Keep in mind that there are two kinds of student involved – regular students from the Olympia campus and incarcerated students at Green Hill. For regular students, *Gateways* was their full academic load for the whole academic year. This meant ten hours of class time on the Olympia campus, comprised of a combination of lecture, group discussion and skill development workshops, and 3-5 hours each week at Green Hill in sessions shared with Green Hill inmates, who enrolled under separate arrangements for completing high school studies or gaining college credit.

The Green Hill class time was group discussion about assigned readings, whose nature is indicated provocatively by the Evergreen catalogue entry for *Gateways* in 2023–24:

> The content of our inquiry will be shaped collaboratively: in part by the faculty's training, in part by the interests of Evergreen students, and in part by the interests of Green Hill students. All students will wrestle with topics in diversity and social justice alongside other subjects chosen by the incarcerated students.[6]

Here again, suitable adults are a key ingredient, but young people have substantial influence over the content of their studies. *Gateways* in 2023–24 was staffed by two faculty, one trained in American studies, the other in biology and veterinary medicine. They described their specific subject-matter contributions as "political economy, writing, health, mass incarceration, liberation education, and the public health crisis of inequality". In other years, different faculty would bring their different backgrounds to bear. But faculty knowledge is only part of the Gateways picture. Willingness and ability to cede some authority to students and to support rather than control their actions are equally important. Evergreen's main on-campus programs call for the same qualities, so its hiring choices and regular teaching experience make good background for *Gateways*.

6 This and adjoining quotations: Prouty (2023–24) The specifics for 2023–24 differed from those of previous and succeeding years, but the approach was unchanged.

The animating spirit here is that of the Latin American movement called popular education in English. ("Popular" here means "of the common people," not "widely liked or valued.")[7] It aims to allow participants to see connections between their personal experiences and larger societal problems, and thereby encourage and indeed empower them to change their situation for the better. This is a matter of interpersonal contact, communication and shared work as much as of absorbing information. The specific information matters less than the experience of shared study of meaningful topics. The 2023–24 catalogue puts it this way:

> Students will practice learning how to meet other learners where they are at (literally, in order to better understand the conditions that put some of us in prisons and others in colleges). Students will also develop or hone their skills in assessing the role that social determinants like poverty and racism have on bodies and health, and examine the ways that individuals are held responsible for manifestations of structural violence.

This approach is much more explicitly political than one would expect a prison system to tolerate. Considerable credit goes to the successive *Gateways* faculty and also to their hosts at Green Hill for keeping primary attention on the effectiveness of this approach in generating engagement and educational progress among both groups of students. An earlier *Gateways* faculty member put it this way:

> Our primary goal – supported by the theories and practices of popular education – is to create an environment in which each student becomes empowered to share their knowledge, creativity, values, and visions and dreams by connecting respectfully with people from a range of cultural, class, and other backgrounds. (Herbison, 2015–16)

The goal, in other words, is substantive personal development, not immediate collective action.

4 Student projects in the wider society

A third important example comes from Poland. Zwolnieni z Teorii ("Beyond Theory" in English[8]) began in 2014 and grew rapidly as an online platform for young people to explore possibilities for projects which might benefit society, to

7 For some definition, history and overview see (Hurst, 1995).

8 "Beyond" is the organization's favored English translation of the Polish "zwolnieni", but "exempt from" or "released from" are part of the Polish meaning, and are often offered by machine translation. I use the organization's Polish name throughout, as a matter of respect, but readers can freely substitute Beyond Theory if they wish.

meet potential teammates, and to learn about the stages of bringing a program idea into being. Over the past ten years, over 76,000 Polish teenagers have used the platform. There is now an annual Olympiad at which awards are given for the best projects in education, environment, culture and civil society. At the moment of writing (February 2025) over 5.300 projects were registered with Zwolnieni a Teorii for the 2024–25 school year. Past years indicate that about 25 % will be completed by the May 2025 date of the Olympiad (Zwolnieni z Teorii, 2025a).

The process starts with a student over the age of 13 finding the platform online, exploring existing projects or simply proposing one. A project must gather at least two students and generate a short tentative description of a social problem to be addressed, some outside evidence for its existence, and an idea for addressing it that fits in one of four categories – social advertising, public event, technology, and collecting for charity. After detailed planning, including affiliation with a school or university, budget, sources of outside support and other matters, comes implementation itself, which is to happen within 8 months and be fully documented. Zwolnieni z Teorii sets specific levels of achievement for projects to be considered complete and be celebrated at the May Olympiad. The levels are not high, e. g. 50 attendees at a public event or a documented audience of 5.000 for social advertising, but they serve to separate projects which make a genuine appearance in the world from those which remain notional.

Significant numbers of projects exceed the minimums by very large amounts. One team in Warsaw, upset by the widespread presence there of large billboards on building facades, used drones and Photoshop to make a two-minute video that had over 100.000 views within days after posting on the Internet, was aired on national television, and contributed to a national law regulating outdoor advertising (Technology Review, 2016).

A sample of further examples appear on the Zwolnieni z Teorii website as short statements by involved students which are worth consulting to see the students' ability to articulate their initiatives – Grazyna Business Online Savings Campaign (conducted through social media), Clicked Programming workshops for orphaned children, Bee Friendly Bee Protection Campaign (urban beekeeping) (Zwolnieni z Teorii, 2025b).

This is just a handful of the thousands of projects launched and mentored by Zwolnieni a Teorii. The three founders, Paula and Marcin Bruszewski and Rafal Flis, have been adept at getting the alumni of each round to publicize the platform and recruit new participants, and equally skilled at involving government ministries and major national and international corporations as sponsors and supporters of this now very large scale enterprise. Completion is frequent and enthusiasm for Zwolnieni z Teorii has grown steadily.

The program initially lay outside schools and universities. It used Internet approaches, like gamification, to catch and develop interest. Over time, relationships have developed which involve teachers as mentors and advisors most of the time. At present, about 80 % of completed projects come from students whose teachers have become active advisors in the Zwolnieni a Teorii mode.

The appeal to teachers is somewhat the reverse of the usual. What matters most is not the teacher's knowledge of subject but willingness to support student project teams. Zwolnieni a Teorii is quite candid about the fact that most teachers are not trained or experienced in the competencies it believes are most needed for projects in the real world – "cooperation, communication, critical thinking and creativity, but also empathy and a sense of agency" in the words of the current Teacher's Guide (Zwolnieni z Teorii, 2025a).

The program holds quite firmly that the needed competencies cannot be effectively developed using the lecture method traditional in Polish high schools and universities. The teacher is much more in the role of a coach than a boss. It is students who do the actions in the world and directly experience the results. The teacher can give directions or suggestions, the teacher can cajole or inspire or give pep talks, but teachers cannot carry out the actions themselves.

This means that teachers need to learn a good deal about group process, giving and receiving feedback, active listening, managing and supporting student motivation, and risk management. They also must become familiar with Zwolnieni z Teorii's guidelines and the Olympiad system of reports and criteria, but the more general abilities, which concern the process of working with students much more than content, are critical. This indeed is a constant element in the programs considered in this essay.

The subject categories, such as charitable giving or public events for good causes or even technical demonstrations, are hardly new. The means adopted by students, however, often are – social media, current digital coding, drones, and so forth. The teacher's work is thus partly on the ground, so to speak, and partly about getting student to take wing and move past them.

Zwolnieni z Teorii does not visibly draw on the tradition of popular education, nor does its rhetoric point to social justice as a motivation. Its national scale is enabled importantly by sponsorship and funds from large corporations, and entrepreneurship is as much a theme as social need. This is in stark contrast to the other examples here. It shows that student-led initiatives can occur across the full range of a society's settings, which extends its applicability greatly. It should also serve as a note of caution, though. Widespread adoption of programs for student initiatives might end by increasing disadvantage, because dominant social groups tend to align material support and organizational rules and conditions to enhance their advantages.

5 Action research

Another significant arena of student initiative is youth participatory action research, often referred to as YPAR. Young people carry out research on problems they identify and propose actions based on that research to alleviate the problems. In the West, the young people are typically high school or college/university students; the research topics are typically close to their everyday lives, whether in their communities or in their schools, colleges, or universities. The young researchers may or may not take part in the proposed actions.

This is a sprawling field, connected more by general purpose and spirit than by shared definitions, methods, or criteria. I discuss here only efforts in the US. Projects describing themselves as YPAR have involved students as young as 10 and as old as 25. Sites of investigation include schools, neighbourhoods, communities, and local environments. Topics very close to students' lives, such as school safety, drugs, food health, inequitable or ineffective school policies, are predominant but larger topics, like food deserts or access to lakefront beaches, have also seen attention (Buckley-Marudas, 2020). Research methods are typically low-budget but quite various, including interviews, paper and digital surveys, "photovoice" (photographs with description and interpretation), physical sampling (of plants, animals, or objects), and audio recording.

YPAR projects have a general shape similar to those in Zwolnieni z Teorii. There are some important differences. There is no central organization in the US which sets criteria or timing, and there is no regular national event of celebration and public presentation. Like the Polish program, projects should culminate in action, but unlike it, YPAR programs all agree that research is the central activity.

Research is prioritized as a way of helping disadvantaged groups gain self-awareness, confidence, knowledge and political experience by giving voice to personal and local situations and finding patterns of causation in them. It is not academic but participatory work: the researchers are studying themselves and their situations. The result, in Latin America and elsewhere, has been politically potent as well as personally enlivening for its participants.

With some exceptions, such as Tennessee's Highlander Center, popular education of this kind for adults has not flourished among adults in the US. In schools, however, the lineage is genuinely present. The 1960s, a time of considerable social upheaval and questioning, had participatory action research in the air. In the "progressive" wing of US school education, deeply informed by John Dewey's views that education needs to be rooted in experience and that such well-rooted education is vital to democracy, it was a welcome thought that the social issues of the day were present in everyday experience of students.

Students from disadvantaged backgrounds definitely found immigration, tenancy, family violence, and the like present at home and in the streets, and there were parallels inside the schools in disciplinary practices, drug use,

bullying, and the like. So a marriage of popular and progressive education was a natural one.

Starting YPAR is a local, not a state or national matter. While there are important national and state-level policies and funding, school governance, policy, and practice are very largely handled in the US by local school districts, which number over 13.000 (Education Week, 2024). It happens that disadvantaged students are quite unevenly distributed across districts.[9] This translates to very big differences in teacher and administration awareness of disadvantage and motivation to respond to it. Taken together with the immediacy of conditions outside school associated with poverty or affluence, this makes the YPAR approach much more appealing to some districts than others. It also makes it politically charged, but I limit attention here to situations which have born fruit.

One of the important US centers of information and professional support for these programs is the YPAR Hub at University of California, Berkeley. It has composed a design guide for YPAR activity – background information, general advice, and specific guidance for bringing a YPAR project into being (Ballonoff Suleiman, 2024). As a typical case of the latter, the guide sketches a health-related scenario, in which a local health director invites student investigation as part of forward planning. The ensuing work follows much the same sequence as projects in Zwolnieni z Teorii, but is handled as research followed by action.

Action is not described as activism, however:

> Many projects distill their findings into presentations, reports, or exhibits to educate social networks, community members, or organizational partners. Other YPAR actions include meeting with school, organization or political decision makers; creating or modifying an intervention or program design based on YPAR findings; or coalition building or partnering with organizations or individuals to build community momentum around a specific problem/solution.

It may happen that demonstrations, strikes, or confrontational action of some kind is instigated by a YPAR project, but that is not a definite intent or a typical result in the US work of this kind. The animating hope is that meaningful change, which means change in the students' world which is meaningful to them, will come from well-conducted projects of this kind.

Does it come? It is quite clear from numerous anecdotal accounts that actions of the desired kind can take place. At the most physical level, new facilities for filtering water have been created, playgrounds have been revived, and old mining pits have been filled. At the level of policy and institutional practice, there have

9 The state of Georgia is representative in this respect. The index of poverty incidence is the proportion of "directly certified" students in a school district (2023–24). Governor's Office of Student Achievement (2025).

been modifications to school cafeteria menus, changes in policies about sexual education, advocacy to legislators about stricter access to tobacco, and race and gender related changes in school policies and practices. YPAR youth have conducted awareness and information campaigns on social media and also through traditional television and newspaper channels, instigated the formation of youth councils in schools, and in at least one instance got an advisory board established or a local construction project. Finally, it has frequently been noted that all actions of this kind are occasions for intergenerational dialogue in communities. With research as the starting point, the seriousness and effectiveness of the young people who do it provides a powerfully legitimizing frame for their proposals and focus for the ensuing work (Shamrova, 2017).

Note that customary social science research apparatus, such as sizable samples and control groups, may be unavailable to this kind of work. Projects are finely tuned to the specific opportunities and conditions of the given locations. It may be more productive for program developers and maintainers to rely on well-developed case studies and their own considered judgment.

Such case studies are not readily available as yet. There are many short videos and text accounts of projects,[10] but few detailed, thoughtful published accounts of individual YPAR projects. One notable exception is the 2023 account of the "Purple Room" project (Rombalski, 2023). More such case studies would be of great service to the improvement of YPAR efforts.

6 Adult role when youth lead

A final topic in this discussion is the ability of adults to do their part in efforts where youth take the lead. Just as Lorenz's geese needed human guidance to the right place, time and initial moves, young people generally need adult involvement in getting their projects off the ground (metaphorical pun intended). The adults need to be judicious and adroit. Most adults find they have learning of their own to do when they undertake it.

Heather Kennedy interviewed 17 adult facilitators in Stanford University's version of YPAR. They had helped young people through a fairly typical YPAR process – team-building, learning about community issues, selecting one for further research, and making a multi-media product from their findings. All the facilitators were graduate students in social work (Kennedy, 2018).

10 In addition to YPAR Hub, cited above, the following may be useful: CFCL (https://ypar.cfcl.ucdavis.edu/Stories.html); KnowledgeWorks (https://knowledgeworks.org/resources/ypar-youth-participatory-action-research-guidebook-curriculum/); YMCA Honolulu (https://snaped.fns.usda.gov/library/success-stories/youth-participatory-action-research-ypar)

A definite pattern emerged from the interviews. In one way or another, there was an early period of "overwhelming" feelings – being out of touch with the youth, unfamiliar with the tasks, unable to control the sessions, burdened by high expectations and little time for fulfilling them. A period of reflective self-criticism typically followed, in which issues of control, expectation, and obedience to the manual came to seem self-imposed and unproductive. This moved the facilitators to a willingness to trust much more fully the young people's instincts for pace, emphasis and direction and eventually led to a pattern of shared effort. A full discussion is far beyond the scope of this essay. I just repeat what has shown itself several times already: adults are essential, but adults are not and should not be in control.

Adults are indeed essential – as advisors, as supporters, and as buffers against outside pressures. The first two roles need little elaboration. Students arrive with much to learn and with needs for encouragement, fellowship, and respect, but the teaching profession has a good general awareness of the importance of good advising and support, though accepting the primacy of student choices of direction is hard for some.

The need for buffering is less familiar. It arises from the tangle of agendas at work in schools and communities, from the very youth of the actors and from the often charged nature of student-led activities and actions. A good proposed action with strong student energy behind it may be vetoed by a school principal for fear of it might antagonize key patrons or decision-makers of other initiatives (Lac, 2022). The teacher needs to soften the impact of this denial on the students, using some mix of explanation, shared disappointment and forward-looking consideration of next steps.

Equally important to counter is the common adult dismissal of youth as not yet capable of sound action. The adult teacher of student-led work will often encounter this kind of dismissal and needs to address it, partly by persuasive defense, partly by insulating students from excessive exposure to it, partly by using it to increase motivation for doing excellent work.

Finally, student-led projects and actions which give voice to social ills often encounter opposition from parties threatened by social change. Not all student-led projects are exposed to this resistance, as the experience of Zwolnieni z Teorii makes clear. But for the US inheritors of the popular education tradition it is always close to the surface, and teachers are called to help clear pathways for student initiatives of this kind. Quite often, students themselves are eloquent and persuasive when given the chance, but adult effort is often very important in keeping the needed doors open.

The US YPAR literature is quite strong on the need for determined political effort, but rather thin on strategy and tactics for carrying it out. Once again, there is need for good case studies.

7 Conclusion

The present book is an exploration of "educational approaches that give students a stronger voice in shaping their educational experiences", in the words of the co-editors. The above accounts of student-led real-world initiatives illustrate one such approach. Though details of all kinds differ greatly between the different settings, the basic pattern can be put very simply:

With not too large a team and with adult help, students choose a real world problem or opportunity and a way of addressing it, figure out the practical details, and carry them out.

The pattern is simple, each step turns out to be simpler than outsiders expect, and the results are often genuinely constructive for the people affected, and vibrant for the student initiators and implementers. That is not to say the work is trivial, far from it. Imagination, judgment, perseverance, and diplomacy are much needed. The striking truth about this approach is how readily these characteristics emerge, from students as well as adult participants in these initiatives. The approach asks the right questions, and good answers arise.

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Chapter 3 | Community – Zone of Unsettled Learning and Challenging Connections

Lin Nelson

Starting and re-starting this essay is a sign for me of the tortured times we're in … in the US, just north of "the Gulf of America", and south of our exiled former friends in Canada, Trump's dream 51st state. It's a time of upside-down-ism, of contorted realities, and the challenge of learning, teaching and shaping knowledge is stranger and more unsettled by the day.

But on we go… as teachers and lifelong students of the life around us.

I'm a retired teacher, so my sense of anguish may be even more distilled and melancholic. On the other hand, we are a learning-species (so we've told ourselves) and there's hope – and desperate need – that our learning continues and revitalizes itself.

I have wandered in and out of the teaching life over many decades. I taught college in PA and NY for a while. Then in search of more grounded learning, I departed academia to be part of community-based education in worker-health-and-the-environment. This proved to be very stimulating, disturbing and gratifying all-at-once. I became enmeshed in and energized by people working across differences (of life station, class, educational level, professionalistic identity, risk to their health) to tackle one of our most persistent – and almost always backburnered – conditions: the havoc delivered to our bodies and the environment via modern production as we experience it. I learned plenty from injured and angry workers who joined with distressed neighbors, concerned health care providers and eco-warriors – all wondering "how can we go on like this?" I learned with folks reconstructing our knowledge about the price the body and mind pay for the enormous convey-belt of material-creation that is at the foundation of modern life.

One person I looked to for insight and inspiration was an industrial worker – Tony Mazzochi – who is at the center of a book *"The Man Who Hated Work and Loved Labor"* by Les Leopold. Mazzochi was a brilliant, dedicated and adventurous advocate of worker and environmental health who – for a number of reasons – did not stay in formal education past the ninth grade. One of his great contributions to collective learning: shaping partnerships between industrial workers, their families and neighbors to the vital networks of trained and pedigreed workers in biology, industrial hygiene, medicine and public health. He was

on the exciting and much needed frontier of joining young in-training medical students with injured, aggrieved workers and their unions. To me this was – and is – a vital model of collaborative learning, with the community-as-site-of-learning-and-healing.

When I returned to formal higher education at the Evergreen State College (which Doug Schuler profiles in his opening essay), I was eager to see how institutional education could partner with neighbors to push for more critical understanding, to pursue key questions… and to shape relationships that foster and celebrate learning, without being obsequious about degree-bearing status. Evergreen is a good place for this journey, but it too needs to be shaken now and then into strengthening its commitment to "the public". I was fortunate to be part of a cadre of teachers, staff and students who had the sense and sensation that community collaborative learning has much to offer, if it doesn't recede into institutionalized window-dressing.

There are some prominent challenges in going this route:

- In higher education, the pecking order elevates – for faculty and others – research, administration and classroom teaching above community-based learning and collaboration. "Doing community work" is often characterized and caricatured as "just hanging out", "not real academic work," "for the research averse", for "lady and lord bountifuls" who just "wanna do good". Etc. Not real education or not as cerebral or thought-provoking.
- Faculty, students and staff who "go to community" are faced with many interpersonal, political, analytic, and life-path challenges… all bundled together in ways that are messy and murky.
- Those in colleges and universities who "go to the zone of community" may lean toward thinking about what they have to offer and not openly acknowledge what they have to learn. Relations are/should be reciprocal and evolving, at times devolving, and then back on a shared path.
- Sometimes community-neighbors of higher education have experienced the "philosophers looting a small town" sensation portrayed in Klibben's cherished (by me) cartoon. That is, they can feel – and maybe are – being used as a "learning tool" and not recognized as a partner. Being raw material for the higher-ed-sanctified-knowledge-class gets tired very quickly.
- The much used "Service-Learning" model can sometimes lean into either too much of "we're serving you, you fortunate neighbors, who may be un-pedigreed" or … in the direction of being too servile, bearing the dutiful, good-citizen posture that makes mutually critical-and-committed relationships difficult.

In other words, community-connected education is fraught… a hornet's nest of possible pitfalls and possibilities.

And I will come clean, will confess, that I no doubt have slipped into many of these pitfalls, to be challenged and unsettled by teaching colleagues, community partners and students. There's always a lot to learn.

So, not an easy zone to be in. But one of the most engaging and enlightening… and hopefully impactful in significant ways.

Students today are especially at high risk. They have much to learn and to give. They are also facing serious challenges in terms of shaping their life-paths, enduring the financial free-fall with the current administration's assault on higher education and on student aid. They may feel they need to go the safest route, with the messiness of community life looking precarious or risky or belittled as not-academic-enough.

1 The shared journey of continually shaping knowledge

A key feature of "doing community work" in relation to academia is the question: "Who shapes knowledge and understanding?" This is clearly the arena of higher education … with the vital, daily demands on students and practitioners of engineering, medicine, public health, the biologic science, as well as the more amorphous but equally demanding knowledge-journeys in the arts, humanities and social sciences.

Community as knowledge-seeker, knowledge-bearer and knowledge-challenger is often less clear, less respected and a murkier zone… a blend of "person on the street", social movements and learned types in public zones of governance, economy and social life. And all connections and personas in between.

There are those who are adventurous and confident (or reckless?) enough to assert that learning and research "happen" and "thrive" beyond the ivied gates. This is not a new issue… and has been cultivated, experimented with and championed by those who elevate education and knowledge creation as something beyond the certification process of higher ed. There's a long history here… and I only want to mention it. And I hope more and more colleges and universities develop this in earnest, with respect. "Popular education" is a primordial place of communities and movements valuing learning for its own sake and as the lifeblood of communities. This has been especially the case in the civil rights movement and liberatory movements around the world.

Related to "popular ed" is the world of democratizing research. This emerges as a rich blend of ideas, practices and contributions in the morphing world of participatory research, participatory action research, community-based research and related labels. While it's too much to go into here, I want to point out that "the community" can be research object/subject… and also active zone of research and "the researcher". Those who pursue this route with communities as their partners and teachers will attest to how challenging this can be.

Communities offer info/data… but they can also talk-back, challenge the data and undermine "the researcher". One of the key inspirations for me is The Highlander Center (a vital popular education center in Tennessee) which has shaped some of the most critically needed research on toxic exposures by concerned mothers in their communities (Merrifeld, 1989). Another is a searching project by physicians seeking to understand health/disease/life from the perspective of underserved, at-risk communities in different parts of the world. (See for example, Dr. Patrician Seymour's learning about and from midwives in India, in "Nurtured by Knowledge"). This kind of work is not for the faint-of-heart. It requires a blend of keen dedication, unusual humility and sense of adventure in collaborative learning in community.

2 Learning Community – walking, looking, talking, scribbling…

Amidst this terrain of community education and research is the daily challenge of "what to do"… "how to learn this"… "how to make it real, maybe". One thing I've liked doing with students is "the community walkaround". Nothing esoteric or erudite by typical academic measures. But a way of activating the senses and shaping good questions. Sometimes it can feel odd for a group of students and their teacher/s to wander around a community… maybe a little old-timey, out of pace with our e-world. Why walk and look when you can check into it all on your cell? Why "hang out" with a wandering crew of students whose questions might be poorly formed or annoying? Why listen to your faculty whine on about some old historic site in the community? An old union-bar? An early detention center? Eroding art on the wall of a barely functioning store?

All possible dismissals and denials of walk-around learning. And yet I… and the students… and others from the college who I've been teaching with … seem to mostly thrive with all of this. We have a launch gathering from a friendly fair-trade store and café, listening to the owner/organizer tell us about local-to-global links in the fair-trade movement. We move on to a celebrated and complex community mural that emerged from a local woman's journey to Gaza and links back to a wide range of community organizations (Rachel Corrie Foundation, connected to Rafah, Gaza). The group wanders and follows a mapped-out journey, but with several unexpected side stops and queries about what we're passing by. Stops we typically have made: food bank, bus station, community organizations, storefronts, children's aquatic museum. Visits to the local artesian well unveil hydrologic treasures and eco-mysteries… as well as interesting conversations with visitors who come to the well for its hydrating and healing properties. And on to other sites, memories and projects.

The best journeys have emerged when students offer their own, sometimes challenging and discordant, observations of what we're seeing. Most important

is students adding to the mix of info or asking questions faculty hadn't pursued. Especially… "what's behind those storage doors? Who uses these? Did you know an indie-press is working in that warehouse?" Etc. The kind of questions and paths to deeper inquiry that can only emerge in shared conversation while together, being out in the world.

Community journeys can be shaped around pressing questions… how will this community look 10 years from now with sea-level rise? An urgent question in our community at the base of Puget Sound, with the downtown larger built on landfill and pilings. Or an unexplored, taken-for-granted question: where is art emerging in our community, how do we see it, how do artists survive, what would it be like "without art"? What are the unseen histories and communities? Where were – and where are – the… tent communities of displaced folks? These are among the many questions that could be explored, amidst the wandering and conversation.

One of my colleagues – geographer Zoltan Grossman – has, along with colleagues and students, taken the community walking tour to a deeper, more studied level. Over several years, Grossman has stimulated intensive research in his classes which has evolved into a series of thematic walkarounds that explore a range of themes… the original people of the area – the Squaxin Tribe, the past/present/future of shipping as part of this political ecology in the Puget Sound, the mostly covered up history of China Town, and the impact of fossil fuel extraction/shipment. Each walking tour is shaped by critical research, searching questions, and public activation through the friendly summons to "take this walk". The evolution of these journeys is an invitation to walk, question, and activate what's been learned.

One thematic tour "The Port and Fossil Fuels" explored the impacts of climate change and sea-level rise in a downtown largely built on fill. The walk traces a protest march that brought attention to the threat. *"The Blue Line March was successful in highlighting the dangers of continued fossil fuel use and the impact it would have on Olympia. It was the first of many protests in the city with this goal, and for many young people it would be their introduction to climate activism and water protection. The Blue Line March did not have an immediate impact on policy, but it laid the groundwork for climate justice movements and gave people hope that something could be done"* (from Olympia's Hidden Histories' online guide to self-guided StoryMaps).

One of the most interesting features that sometimes emerges in community walkarounds is for students to notice and learn about the foundation for their experience, questions and judgements. Two students – one from a small rural community near the college and a student newly arrived from LA – will no doubt have differing, maybe clashing, senses of a place. They may have a lot to teach each other, opening up ideas and sensations that they might have missed in each other's absence. Student projects, writing and future plans often evolve and

devolve in the context of the learning around them, the comparative sensation of knowledge creation.

One community zone that students may find compelling or repellant is that of government… or governance, the matter of structured, publicly resourced, authority and activation of "the public good" (with all its variant and conflicting meanings.) My own experience in direct community work over the risks of labor and the threats to our environment meant that as much as I was pulled to the community mobilization arena, I had to also submerge myself in governmental arenas – top to bottom, federal to local. This can often feel daunting or tedious, among other things. But virtually all issues of grave concern must be examined via the governmental structures that enable or impede solutions. In this very moment in the US, we have to "deal with it", it being the daily reconstruction and deepening of authority systems that are shaping our lives and what the next generations will face. And so, as teachers/students, we need to "study up" and critically enter that terrain.

Over the past many years, I've worked with students who dipped their toe in "government" as observer, participant, agitator. Students can simply learn through careful observation. Becoming a student of local government can be a truly eye-opening experience… with some students learning how and when to observe the machinations of local government, the financing, the impact on everything from planning for sea level rise to housing to food security. They may become regulars at city council sessions… And/Or with the range of non-governmental organizations and activist groups that watch, interact with or take on local governance. Others may do this at the county or state level. Olympia WA – being both a modest burg, a small port and the state capitol – has much to offer in the way of observation, involvement, challenge, and critical analysis and writing. Every community offers some avenues for insight and can be shaped as a critical learning path for students.

The "community journey" approach to collective learning (teachers, staff and students together) can be a focal moment in a class – a central launch to the thematic, a repeat journey, or a series of focused small group explorations. It can also be something that new students are invited to participate in… outside of any particular class, as part of their intro to the campus, the neighborhood zone and their evolving participation in it all. At Evergreen the Center for Community-based Learning and Action invites students to walking-tours as part of their orientation to higher ed, creating an ongoing relation with others who are committed to be in steady learning-mode both in and around the classes they're taking. These journeys – whether somewhat spontaneous or following the "hidden histories" model – also shift in real time. As teachers and students grappling with current conditions in DC and around the country, we will see things and report new insights (and worries and rumors) as we connect with various places and organizations in the community. To stay sinecured on campus is really not an option.

3 Classroom and Community – back-and-forth

There are many courses that dip into and reside in the broad arena of Community Studies – some focusing on local economics or public health or youth or education. My own experience as a teacher/learner has been to shape classes as part of a team. With a faculty member who teachers media and is a filmmaker, we shaped a year-long collaborative curriculum called "Local Knowledge" which explored forgotten/hidden histories (especially labor/class issues) and environmental/industrial conditions. Students were challenged to be active researcher/writers and to shape projects that were attentive to and collaborative with neighboring communities. I also became a teaching collaborator with science faculty who wanted an engagement with the social implications of ecological agriculture and industrial exposures. Another class is "Community Based Research" – an arena that is appearing in more and more curricula, especially as it bears on public health. CBR type classes have a growing wealth of materials, readings and case studies that can be the foundation for students exploring the forms and adapting to their own areas of interest.

Finally, I organized SOS classes (Student Originated Studies) which were student-shaped classes, ranging across a wide swath of issues and concerns – all sharing the key feature of newly hatched projects. Students were out in the community much of the time, each on their own path, with weekly collaborative sessions which focused on frameworks and methodologies, such as participatory research; students were definitely in the mode of co-educators as we listened to their various stories of community projects – with all that meant in the way of gratifications to disturbances to adaptive navigation of tough terrains. The cross-wise learning was evident and sometimes quite uncomfortable. One class evolved as a dramatic exploration of how people dealt with their dismay or anger in different settings… with some eye-opening cross-gen tensions. Projects in the SOS classes range from hospice care to community gardens to challenges facing veterans to working in politically volatile situations. All through my own teaching/learning journey, the college's Community Center has been my co-teacher – in navigating the community, exploring opportunities for students and being attention to shifting social-political conditions. I can't quite imagine doing this work without the community-bridging activated through the center.

4 Supporting students finding their voice through community connections:

Ellen Shortt-Sanchez is the Director of Evergreen's Center for Community-based Learning and Action (CCBLA). She is a much-respected guide and teaching partner to many of us as we explore neighboring communities in relation to our zone of interest and the interests of the students. CCBLA is the nerve-center for placing

"public interest" at the center of our learning, through our main campus in Olympia, our sister campus in Tacoma and the Longhouse, with its vital connection to indigenous communities in the region and beyond. Ellen and others in the CCBLA provide much needed support to teachers (new and old) who are in learning-mode as they shape classes bridging campus-community. CCBLA is actively involved with the National Network on Service-Learning, Campus Compact and the WA Campus Coalition for the Public Good. And so, as the Center evolves, it participates in the broad network of efforts across education settings – including primary and secondary as well as college/adult education. One thing that distinguishes the approach Evergreen and Ellen have cultivated over the years – since the Center's launch – is to move beyond the anointed post of "Service-Learning" to a more interactive stance of collaborative learning and democratic action. In other words, it's not a matter of students, with their faculty as guides, "giving their service"; it's a journey of critical learning involving mutual aid, open-ness to criticism, searches for redirection, and the evolving/devolving notion of "the public good". About students' journeys through community-based work, Ellen comments… *"It can be and often is life-changing, illuminating what they want to do in their lives, often being a time of tremendous capacity building."*

Kim Gaffey is an Evergreen graduate, who worked with other students and grads in exploring local food systems, land use and the communal practice of "the garden" as a place of learning, community and sustenance. She is a founder of GrUB… Garden Raised Bounty… which has thrived in the community and the region for almost three decades. GrUB is a place where everyone is a student, all are in learning mode, from staff to local students, as they cultivate community gardens, with a focus on bringing everyone to the table. This is a much-celebrated organization, widely known, with high levels of participation. At the same time, one of Kim's messages is "we aren't who we say we want to be." That is, groups like GrUB don't have a single story, a one-reality that all can agree on. Students are invited and urged to "check the facts", learn more, ask questions, and – through their work – "help the community see itself". When asked about how teachers can help support youth empowerment, she noted the 4 R's… Relationships are powerful and complex; Responsibility for our work together is paramount, needing always to be attentive to the risk of failure; Relevance puts us to the test of what is needed in this world with so much hunger; Rigor is urgently needed where things are often "harder than expected." Kim now works with a range of groups, connected to GrUB as part of a movement cultivating land-based learning. The on-going challenge for young people: "learn where they live".

Learning about land, farming, farmers and farmworkers is a core feature of education, experience, and community collaboration at our college. Shaped by faculty committed to ecological agricultural principles and activated through the farm on the college campus, the teaching is shaped by partnerships with regional farms that welcome students for internships and projects. Longtime teacher and

practitioner Martha Rosemeyer nurtures a grounded engagement from her dedicated work with students in the labs to their outward exploration of the labor of farming in the region. She and her students are essential collaborators in the college's annual gathering "Farm Worker Justice" where students engage with the complex issues of farmwork in the region – shaped by long pathways of immigration, now politicized and endangered by the current national administration. Teaching in this arena takes a steady hand and a willingness to go above and beyond the lab and the classroom… to stay connected in the shifting terrain of farmland policy, environmental impacts, labor rights and the challenge of providing nourishing food in an equitable way.

Another very active educator in the community is Randi Miller, working from LEAD, focused on education for youth and adults with disabilities. Through LEAD's Kokua project, Randi has guided many college students to become learning partners with other folks facing challenges in learning and in finding their way in an often unwelcoming world. She sees that those students often need to be pushed toward responsibilities they haven't taken on before…. to sense they are depended on to be reliable, engaged and self-critical. She tells of college students partnering with people who need and want to tell their stories… in one case, creating a self-published book to much acclaim. These students very often "learn more than you teach". Much is asked of students working with those who are labelled "disabled". They have to search themselves to understand what they have to contribute, to learn, to question. An important feature of this collaboration between a college, its students and the hosting organization is for the teachers to take their sponsorship of those students seriously. While most students get substantial support and guidance from faculty, there are those who are just given "paper support"… signing off on the paperwork, instead of active guidance, site visits and meaningful collaboration with the host organization. That is, faculty supporting students need to recognize they too are in learning mode and need to step out into the community and its diverse organizations.

Teachers in the broader community have much to share with college educators. In Olympia, Evergreen as the local "experimental" college is neighbor to an elementary school "Options", also a so-called experiment of sorts – both focusing on alternative modes, more collective/group-based approaches to learning and critical engagement with the community. Options educator Marty Manley has lived the teaching/learning life and is committed to the "art and practice of inquiry"… with a continual search for "what's out here to make the learning three dimensional". Having guided many a young child through grammar school, Marty has also shepherded many a college intern into the life of teaching. She sees the voices of students, from the kindergartners in Options, to the college students learning to be teachers, strengthened from being out in the broader community – to contribute and to think about more interactive learning/teaching, whether from community gardens or learning from elders. (Having Marty as one of the key teachers of

my daughter, I have vivid memories of her bringing in her students' grandparents to share stories of their experience of WW2). Marty, as retired teacher, has many stories to tell about young and old finding their voices.

One essential element in shaping community-based learning is to collaborate with staff in advising and student support who have deep experience in community work, both near and far. One of my colleagues is a seasoned advisor and community advocate who has witnessed and supported student work for decades. Jean Eberhardt has the benefit of both enduring connections in our local community and in a longtime educational partnership in Nicaragua. She offers some wise words of advice: *"I think faculty should see community partners as genuine longtime partners, and present their students with a larger framework of two or three quarters long engagement. The relationships should be framed and seen as reciprocal and not stepping stones to the students' futures. Conversely, close work with the community organizations should be ongoing to ensure students are supported to engage in meaningful work."*

V. Guardado is an Evergreen graduate and now staff member. She works at the Center for Community-Based Learning and Action, with students who are community engaged and also in need of material and strategic support themselves. She values community-based learning, both from her own experience and in what she sees in the potential for students and for community organizations. She's also a seasoned realist and points to both the benefits and risks of "learning the local". This work can be inspiring… and can also foment skepticism, even rage, as the student brings their own "do it yourself" approach to organizations on long paths of local engagement that may feel resistant to DIY. The combustible and challenging nature of learning-in-real-time-and-place calls for engaged, adaptive students and teachers. V calls for enduring, stronger support for places like Evergreen's Center for Community-based Learning… because the learning never stops, must be adaptive, and must happen not only in, but around the curriculum. V as learner, now educator, discovers herself to be an essential, but always adaptive, connector for students, teachers and community partners.

5 Parting Thoughts

This way of learning and supporting students is never done, always in flux, shaped by the learning arc of students, relations between campus and community, and the broader political conditions for education. But if we are to stand by our students, we need to cultivate and not avoid the volatile landscape of community-as-teacher. Students can flourish if they grapple with the communal/social/political conditions shaping education… whether they are headed to medical practice, construction/architecture, teaching or labor organizing. Through blending knowledge of popular education practices and participatory research with

their lived experience in community settings, they'll have the benefit of shared, always unsettling, knowledge that challenges and strengthens them. There is no easy formula, no one plan, no predictable linear models. But there are practices, tools (tried and challenged), organizational networks and partners that can help learners/educators shape paths that are distinctively meaningful to them and gratifying to the communities who learn with them.

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Chapter 4 | Modulare Mittelstufe Aspern – From *Brennpunktschule* to National Award-Winning Institution

Doris Pfingstner

> "Our students feel truly at home at our school. Since winning the National Award for Innovative Schools and through our regular presence in the media, they have become proud of being part of our community. They know they attend a special school. Media representatives, politicians, and delegations from other schools and University Colleges of Teacher Education visit us regularly. During open days or other events, students confidently take charge of presentations and speak with remarkable poise. This confidence stays with them in life – and that is perhaps the most valuable thing we can give them."

1 The Starting Point

The journey was long and required enormous perseverance. I applied as an independent candidate and knew from the start that it would not be easy. I deliberately chose a school where I assumed the competition for the principal position would not be particularly strong – and that was indeed the case.

No one should expect applause from day one. I certainly didn't get any. When I started on April 1, 2009, there were just 23 new registrations sitting on my desk – despite space for 80 to 100 students per year group.

It became clear immediately: The students we didn't attract ourselves would be "assigned" to us by surrounding schools. We had a noticeable surplus of boys and not a single student with an eligibility to attend an academic secondary school (AHS). Many families were upset or even angry, as I later heard from local primary schools, when their children were placed at Eibengasse. At those schools, real dramas unfolded – children crying, parents protesting. And frankly, I could understand them.

The school's reputation and appearance at that time matched what one imagines under the term *Brennpunktschule*[1]: frequent altercations outside the building, a harsh tone in the corridors, open disrespect from students, parents confronting

1 The image the school presented at that time matched what one imagines under the term *Brennpunktschule* – a socially challenged school marked by conflict and instability.

teachers – and, to be honest, teachers sometimes responding in kind. The entire atmosphere was toxic.

For months, I was mostly putting out fires. Hardly a day passed without an escalation or shouting match. It was not unusual for students to meet outside the school to ambush others.

I had underestimated how hard it would be to break that pattern. The first few years were extremely tough but worth it. Over time, the school transformed completely. One key factor was reorganizing structures to create calm and order. Another was changing our pedagogical approach: shifting how we related to students and rethinking what it means to be a teacher. Instead of pure knowledge transmitters, teachers had to become coaches and mentors. That change of mindset was challenging, but it ultimately became the foundation for our success.

2 The Year Teams

Just six weeks after taking office, I introduced a new structure to begin the following school year: year teams. The idea was that a small group of teachers would accompany a class of students – and their parents – for four years. My reasoning was simple: the better people know each other, the better they work together and the more respectfully they interact.

At first, the change caused uproar. *"Oh great, she's come in and wants to change everything",* was a common comment. I dissolved existing teams and reassembled them through a team-building process. The result: three "dream teams" and one group that brought together all the opposition –a group that kept me busy for years. Still, it was the right move.

Fifteen years later, these year teams function like small families within the school. They work closely, know what's happening in each other's classes, and support one another when students or parents are struggling.

The system also helps new teachers settle in quickly. Over time, this organizational structure has proven to be one of the most successful decisions we ever made.

3 The *KoKoKo-Lesson*, Consequence Model, and Conflict Resolution

Already in our second year, we introduced a *KoKoKo-Lesson* (Communication, Cooperation, and Conflict Management) in every grade. We developed our own curriculum for it. The class is still mandatory today – no grade, but compulsory attendance – and taught jointly by the class teacher and co-teacher.

It focuses on the essentials of social interaction: how we treat one another, what rules apply, and how we create a positive class culture. Each year, students elect a Social Champion to recognize outstanding contributions to the class climate.

A major turning point was our Consequences model, which has become a defining feature of our school. It rests on two principles:

1. Positive behavior is deliberately encouraged.
2. Boundary violations have clear, predictable consequences.

The rules and responses are displayed in every classroom and regularly discussed and adjusted with the students. This transparency creates security and trust. Over the years, the system has brought lasting calm to everyday school life. It gives everyone the sense that "someone is looking after problems."

Of course, conflicts and cases of bullying still occur – as in any school. But we have managed to establish a new attitude toward them. Our guiding principle is:

> "A student who causes a problem has a problem."

I. e., our goal is not to assign blame too quickly, but to understand what lies behind a conflict. That takes time, patience, and genuine curiosity. Sanctions are not an end in themselves, but part of a supportive framework that helps students learn from mistakes. At our school, making amends rather than punishment is central. Students know that even when a consequence is unpleasant, it ends with a clean break – a reset. After that, everyone moves forward again.

4 The Power of a Name

Another key milestone was our deliberate choice of name. Today, we are called *Modulare Mittelstufe Aspern* – not simply *Mittelschule Aspern*. Why? Because we wanted to stand apart from the traditional *Mittelschule* (Compulsory Secondary School) category. Our school type has been renamed several times in recent years, but we decided to define ourselves independently. Of course, a name alone means nothing – it must be lived. My background in business administration with a focus on marketing, and my earlier work as a brand manager in an international company, helped shape the strategy. A *Mittelschule* in Vienna cannot compete with an AHS (Academic Secondary School, lower level). But our aim was that parents who choose not to send their child to an Academic Secondary School would immediately think of *Modulare Mittelstufe Aspern* as their first choice. – And that's exactly what happened.

5 The Modular System

Despite all the challenges – the tensions, the exhaustion – I was able to launch a comprehensive school development process in 2011. Everyone knew something had to change, even if not everyone agreed on the reasons.

I set up a development team with one representative from each year team, and we gave ourselves a year to work out the changes. Our central idea: introducing a *modular system*. Before developing content, we first had to identify how much time we had. By reducing each subject's hours to the minimum, we freed up 15 lessons per week to invest in development. From the beginning, we worked transparently – regularly consulting the whole staff, asking questions, and reflecting together. Our guiding question: *"Which modules will best help our students improve their future prospects and prepare for working life?"*

We wanted practical, career-relevant learning. Four core modules emerged:

- Health & Social Care
- Economics & Business
- Technology
- Tourism (see Figure 4.1)

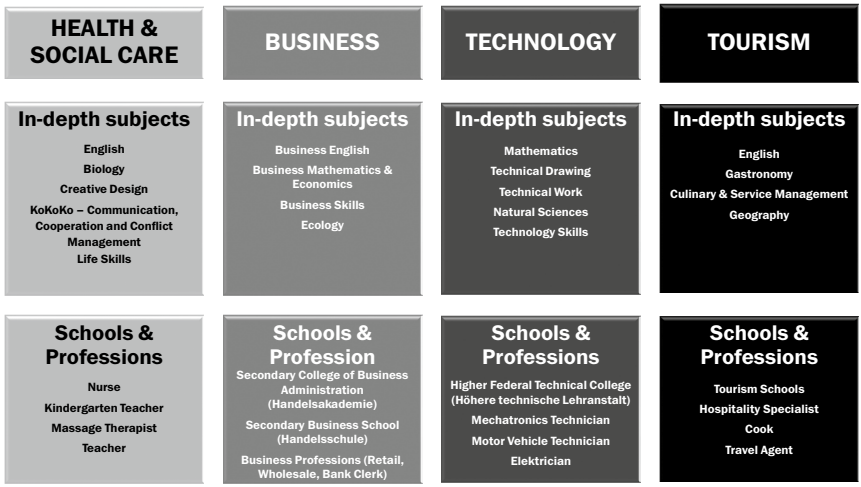


Figure 4.1: The Modular System

Each of these fields offers stable and meaningful career prospects for the future. We then asked subject teams how they could contribute to each module. Within a year, four well-structured, practice-oriented modules were born, and with them, a clear school profile.

But the program doesn't end with lessons. Another hallmark of our school is the rich extracurricular offering, unique in Austria. In addition to regular lessons, we offer non-compulsory subjects that open new interests and talents – such as the Ladies and Gentlemen Club, Code Busters, Science Club, and e-Games. Together, these create a holistic learning environment that supports students academically, socially, and personally – throughout the school day.

6 The Module-based Learning Day

A central feature of our concept is the *module-based learning day*. In the third year, students have two weekly lessons dedicated to module-specific skills. The goal is to help them discover their strengths and identify possible future paths.

Our approach is clear: practice over theory. Instead of textbooks or films, we use hands-on, experiential methods that allow students to feel what a certain activity involves – logical thinking, teamwork, communication, endurance, manual skill, or computer literacy.

These "skills parcours" run for three months, with one skill focus per week. The school development team prepared ready-made lesson boxes for teachers, which are regularly updated. In the second semester of third year, students explore the different modules through practical experience. At the end of the year, they make their choice. We hold parent–teacher–student conferences at which students, around 13½ years old, present their first and second preferences. In 90 percent of cases, we are able to accommodate their first choice. In the fourth year, students spend six lessons a week in their chosen module, working in small, project-based groups. Those who realize they chose the wrong one cannot switch mid-year but they can adjust next year. Most, however, thrive in their modules and use these experiences as a launchpad for their careers.

One outstanding example is the economics and business module. As part of this module, a *Junior Company* – a student-run company – is founded, where students develop a business idea and apply for management or departmental positions.:

- *Real interviews:* Together with colleagues, I conduct professional job interviews – the team selects who fills each role.
- *Raising capital:* Students sell shares worth five or ten euros to generate start-up funds.
- *Running the business:* Over the course of a year, they manage the company – from production and marketing to controlling and market analysis.
- *Business report and reflection:* At the end of the year, students prepare a business report and reflect on their experiences.

All modules are grounded in real-world relevance. The modular system – and especially the module-based learning day – has become a highlight of the four years, for both students and teachers. The preparation is demanding, since no textbook explains how to run a company or teach scientific inquiry step by step. But this practical, hands-on learning is what excites everyone involved. Our students become confident young people who, by the age of 14 or 15, already know what direction they want to take – whether continuing education or entering the workforce.

> "That's our mission: to prepare young people for life – through real experience and practical learning."

7 Laying the Foundations

In the first and second years, the modular system plays only a minor role. This early phase is all about helping children settle in smoothly, regardless of their different experiences from primary school. Our aim is to build stable class communities and a clear understanding of expectations and structure.

As a school – both within the year teams and the full faculty – we share a common vision of how daily life should run:

- Classrooms are entered and left in an orderly way.
- Lessons follow clear and predictable routines.
- Seating is usually arranged frontally.
- Only materials needed for the current lesson belong on the desk.
- Schoolbags are hung up; the workspace stays clean and calm.

These basics are essential for successful learning. If a dispute arises, it must first be resolved because productive learning only happens in a harmonious environment. Various support options are available for this, such as help from the counseling teacher, myself, or other contact persons. When necessary, conflict logs are used to document incidents and find lasting solutions.

A key element of the first two years is the *KoKoKo-Lesson*, which helps students learn to collaborate constructively. At the same time, we pay close attention to academic fundamentals, ensuring that everyone builds on solid knowledge. We use diagnostic tools for this: in mathematics, we participate in *iKM* (individual competence assessment), while in German, we employ our own analysis tools to identify students' current proficiency levels.

The focus of these first two years is therefore on foundations and structure. Only later, from year three onward, does individualization become more

prominent, particularly through the modular system, which gains full significance from that point on.

8 Student Participation

Active student participation is a core part of our school culture. Our student council is called *DeSI – Demokratische Schulpartnerschafts-Initiative* (Democratic School Partnership Initiative). It includes all class representatives, school representatives, and their deputies, who meet at least once a month. In the second semester, the focus lies on implementing the campaign promises of the school representatives. DeSI offers students genuine influence in school life, they can shape decisions, take initiative, and share responsibility with teachers. Over time, DeSI has become integral to many school projects: working groups often invite DeSI members as a "resonance group" to ensure that student perspectives are included in decisions. This underlines how much we value participation, dialogue, and shared responsibility. But participation also involves commitment. Students learn that having a voice means showing maturity and reliability.

Examples of DeSI projects: One notable project was a photo competition on school design. Students were asked to identify the most and least attractive spots in the school. Armed with their phones, they photographed the building and schoolyard and pinned their pictures up for voting. The sports field won as the most popular place. A dark, unused corner of the courtyard was chosen as the least popular.

An ideas competition followed: students proposed ways to improve that space. The winning ideas were realized through pallet furniture designed and built in the Technik module. Today, that once gloomy corner has become a vibrant meeting point for students.

Another project began with a first-year student's request for free hygiene products in the girls' bathrooms. The process took nearly a year, as we had to navigate numerous hurdles: convincing the MA56 (Municipal Department 56 – School Administration / School Authority, City of Vienna) to approve construction changes, gaining the caretaker's support, finding funding, identifying suppliers for dispensers and refills, and developing a sustainable system for student-led restocking.

After much perseverance, the project succeeded – every girl's bathroom now provides free hygiene products, managed entirely by the students. Not every project runs smoothly – and that's part of the learning process. Last year, a group wanted to organize a *Völkerball* (dodgeball) tournament. However, deadlines were missed, communication faltered, and the event had to be canceled. Before the end of the school year, the group held a reflection session to analyze what

went wrong: Why did some projects succeed while this one didn't? What could have been done differently?

Such reflections are crucial learning moments. Students realize that participation is not just about rights, it also demands responsibility and reliability.

9 Public Relations and Partnerships

With our new name, revised curricula, a fresh logo, an updated website, and a new school folder, we began a targeted outreach campaign to primary schools. Every autumn, I personally visit nine primary schools to present the *Modulare Mittelstufe Aspern*. In addition, we organize several open days each year, including two evening sessions and one Friday afternoon event to accommodate working parents.

When we first presented our concept publicly in the 2012/13 school year, it drew immediate attention. The Vienna Education Directorate recognized our model as exemplary and stated: "*This is exactly what all schools should be doing.*"

This recognition led to strong partnerships, especially with the Federation of Austrian Industries (IV) and Teach For Austria. Through the IV, we were able to bring Teach For Austria Fellows to our school, exceptional graduates from non-teaching fields, trained in a fast-track program to teach at *Brennpunktschulen*. Their mission – promoting educational equity and giving young people real chances – aligns perfectly with our school's values. Today, eight dedicated Fellows and alumni from the program work at our school.

Collaboration with further education institutions is also a key priority. Each module now has a partner upper secondary vocational school (*Berufsbildende Höhere Schule, BHS*). As a result, around 50–60 % of our graduates continue to higher vocational schools.

For students who prefer to begin an apprenticeship, we offer an on-site *Fachmittelschulklasse*[2] where they complete their ninth school year and prepare specifically for vocational training. We also host an annual Business Day, inviting leading companies to meet students for "speed dating" job interviews. Thanks to these efforts, nearly every student secures an apprenticeship or school placement after leaving compulsory secondary school.

Over time, this has built a clear narrative: students who come to us from primary school know they have practical, future-oriented pathways ahead, not dead ends.

2 In Austria and Switzerland, a *Fachmittelschule (FMS)* is a type of secondary school that provides general education with a focus on practical or vocational fields (e. g., social work, education, business, health). A *Fachmittelschulklasse* is therefore a class within such a school.

10 Recruiting and Supporting Teachers

Like the wider labor market, the teaching profession is undergoing major change. Many experienced teachers are retiring, and new colleagues are joining – often part-time, as student teachers and *Quereinsteiger:innen* (career changers) complete their qualifications alongside teaching.

Our team is young and dynamic, which brings energy but also frequent turnover, last year alone, eight teachers went on maternity leave. To respond strategically, we developed a focused employer-branding program. We invest time in a multi-stage selection process that not only identifies suitable candidates but also conveys our school's philosophy.

Rather than simple interviews, we organize *Career Days*:

- In December or January, we invite interested candidates for an afternoon visit.
- They receive an introduction to our school structure and learn that teaching here goes far beyond classroom instruction including teamwork and participation in school-wide initiatives.
- Peer-to-peer conversations with young teachers give candidates authentic insights.

If a candidate impresses us, we invite them for a trial day. Every teacher who interacts with them can provide feedback. Those who engage actively, show curiosity, and connect with the team are seen as potential new colleagues. We particularly value applicants with professional experience beyond education, as they bring valuable life skills to the classroom.

Once selected, new teachers join our *Teacher Academy*, a structured onboarding program: Weekly workshops support teachers during their first year of service, offering practical guidance on topics such as conducting parent meetings, digital organization, classroom management, and working with neurodiverse students (e. g., autism, ADHD) etc. Thanks to these efforts, we have built an extraordinary team that continues to grow and evolve – proof of what is possible with clear strategy and shared values.

11 Planning, Feedback, and Team Coordination

In Austria's compulsory schools, teachers work under two different service systems – the old and the new (since 2014). Under the old law, the C-Fund (*C-Topf*) provided around 300 annual hours beyond classroom teaching, used for preparation, meetings, and school development.

In order to establish a clear structure for all teaching staff and to ensure consistency between the two employment frameworks, we have developed a list of essential school-based activities and relevant working groups.

One of my most important tools as principal is the annual planning and feedback meeting with every teacher, 55 in total. These one-on-one sessions review the current year and plan ahead: subject assignments, professional development, and participation in school projects.

At our school, everyone contributes beyond teaching. Under the old system this was mandatory, but even under the new one it is naturally expected, and no one would refuse, as teamwork is deeply embedded in our culture.

A crucial part of this collaboration is the year-team planning hour built into the timetable. All team members are released during the same period, usually a shared lunch break in our all-day schedule. Teams can meet weekly or every two weeks. Initially, some resisted the idea, especially staff representatives who didn't want meeting times prescribed. But I held firm and anchored the slot in the timetable, with one clear message: *"I'm not forcing you to meet, I'm giving you the space to do so."*

Gradually, teams began to value this time. Today, it's seen as a supportive and appreciated practice. The early resistance was expected – leadership often means staying steady through opposition when you know the long-term benefit.

12 Working with Parents

At the beginning, many parents were sceptical and filed frequent complaints. Managing these concerns became one of my main responsibilities. Today, every complaint crosses my desk. Even when I delegate responses, I maintain oversight and try to consider not just the teacher's view, but also that of parents and students. Teachers sometimes react defensively to criticism. Yet every complaint offers insight. My goal is to ensure parents feel heard, even if we don't agree on every point. There is always something to learn from their perspective.

12.1 From Scepticism to Trust – Gaining Parents' Confidence in Our School

Initially, a large part of our parental engagement focused on reassuring the parents who were already part of the school community. At the same time, the challenge was to persuade new parents to enrol their children and to place their confidence in our school. The paradigm shift consisted in proactively approaching parents and conveying that their children are well cared for with us. This process required sustained trust-building and positive public communication – characterised not

by loud promotion, but by the high quality of our educational offering. The aim was to convince parents not through pleasant rhetoric, but by demonstrating that our words are supported by tangible content and well-developed concepts.

12.2 Parental Involvement in Everyday School Life – A Change in Expectations

We do not expect parents to be actively involved in the day-to-day running of the school. However, in the beginning, there was a very negative perception of parents among the teaching staff. In the annual teacher–parent–student surveys, the item measuring teachers' perception of parents' interest in the school had, for many years, the lowest rating in the teachers' responses. Over time, however, this perception has changed significantly – not because parents have become more engaged, but because we as a school have changed our perspective. Parents are not expected to assist teachers when discipline issues arise during lessons. A working parent cannot intervene from a distance when a child behaves inappropriately in class. However, if problems occur repeatedly, it is important for parents to work together with us. In such cases, we hold discussions and jointly consider which measures can be taken at home and at school to bring about improvement. As we are a full-day school and many parents are employed, we do not expect them to check homework or be involved in school matters on a daily basis. However, we do expect them to be present when problems arise and to attend parent–teacher meetings at least once or twice a year.

12.3 Commitment in Parental Cooperation

Attendance at parent–teacher meetings is mandatory. If parents do not attend, either the teachers or I personally contact them. It is important to us that parents take responsibility and participate in their children's educational development. Especially during the first years of schooling, we place great emphasis on close cooperation. For students experiencing difficulties, we schedule monthly jour fixe meetings to monitor progress and ensure that agreed measures are effective. This is also important for providing feedback on positive developments and for ensuring that meetings with parents do not only take place when acute problems arise. Our school sees itself as a reliable partner for parents. We take responsibility for ensuring that children complete their homework at school and are well prepared for the next school day. Parents can rely on us not only to support their children's academic progress but also their social development. Social learning, in particular, cannot take place at school alone – but in cooperation with parents, these challenges can be successfully addressed.

12.4 Consistent Approach to Bullying

When bullying occurs, we expect the full support of parents. Success in conflict resolution lies in the fact that we do not work with accusations, but rather create opportunities for insight. The basis for this is detailed conflict reports, which include statements from students and provide parents with an authentic understanding of the situation. Parents often experience for the first time through this process that their child may not be as innocent in a conflict as initially portrayed. To encourage reflection, students are sometimes asked to write a second version of their statement – one that is closer to reality. The goal is not to confront parents with accusations, but to give them the opportunity to see their child from a different perspective and to work together on solutions. As already mentioned, it is important to us to examine all perspectives of a conflict and to give students the opportunity for self-reflection. The supposedly guilty party is often identified quickly. However, every conflict has multiple sides, and we believe it is essential to work with the students to explore the contribution each person made to the development and escalation of the situation. Only then can a sustainable solution be achieved. Making amends are of great importance in this process.

13 Advice for Other Principals

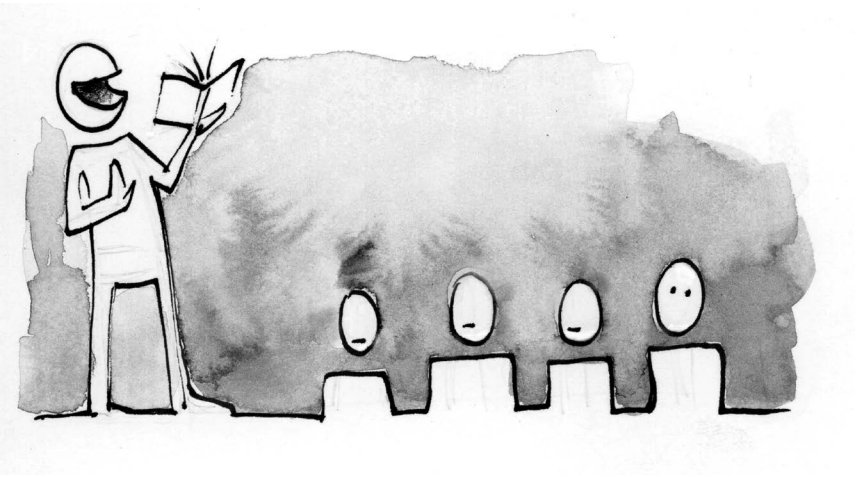
- *A strong vision is essential for successful school leadership.* It serves as a compass for school development and helps maintain focus in the often hectic daily life of a school. Having a clear idea of the direction in which the school should evolve is crucial to avoid becoming trapped in a purely administrative role.
- *The process of school development follows a structured plan.* Starting from the long-term vision, a three- to four-year plan is developed within the framework of the Quality Management System (QMS). From this, the annual plan is derived, defining specific projects and objectives for the coming school year.
- *Involving the school development team and teaching staff in this planning process is vital.* Each spring, planning and feedback meetings are held to discuss and agree on projects for the following year. This participatory approach fosters commitment and accountability within the teaching staff.
- *As a principal, it is important to maintain an independent and objective position.* This means not avoiding resistance but enduring it, while at the same time earning the respect of all. Excessive solidarity with particular teacher groups or overly close personal relationships within the staff should be avoided in order to maintain a clear perspective on leadership responsibilities.
- *Successful school leadership is grounded in clear personal and professional values.* It requires the ability to manage paradoxes, promote self-organisation

and collaboration, and reduce complexity. Agile leadership ensures a steady pace of development without overburdening staff.
- *Through regular reflection and adjustment of processes, the school remains on course.* The vision serves as a guide to ensure that, despite daily challenges and interruptions, the overarching goals are not lost from sight.

14 Editors' Note

This article is based on an interview conducted by Sabine Zauchner with Doris Pfingstner at the *Modulare Mittelstufe Aspern* on February 25, 2025. On September 18, 2023, the school received Austria's National Award for Innovative Schools, placing first overall.

Part II | Democracy in the Context of Enabling Didactics



Drawing by Stefanie Egger

Chapter 5 | Inclusive Education as a Prerequisite for Participation: What Strategies Empower Marginalized Voices in the Education System?

Sabine Albert

1 Introduction

Inclusive education is becoming increasingly important in modern societies. This approach aims to provide all children and young people, regardless of their gender, ethnicity, disability, religion, or social status, with equal access to high-quality education (UNESCO, 2020). This involves much more than the integration of individual students – it requires an education system that recognizes diversity as usual, breaks down barriers, and enables all learners to participate actively (Booth & Ainscow, 2017). This approach emphasizes education as a human right and a prerequisite for social participation, aiming to reduce social inequalities, develop individual potential, and strengthen democratic societies (UNESCO, 2020).

Nevertheless, marginalised groups, such as children and young people with disabilities, with a migrant background or from socio-economically disadvantaged families, continue to face barriers in the education system (Mecheril, 2018; Prengel, 2019). Such barriers often mean that the voices of these students are hardly heard in everyday school life.

In this context, the question arises how inclusive education can be designed to contribute to the social participation of all. Empowerment strategies play a central role in this. Empowerment enables people to determine their living conditions, represent their interests, and actively shape social processes (Booth & Ainscow, 2017). For schools and teaching, this means that students experience self-efficacy and self-determination and can make their voices heard.

A central empowerment strategy is participation, which is the key to genuine co-determination and social participation. This is because students can only develop their potential and take responsibility if they are actively and explicitly involved in decision-making (Ainscow, 2020; Boban & Hinz, 2020). Closely interwoven with participation are the corresponding concepts of human beings (Albert, 2022) and a professional pedagogical attitude (Schwer & Solzbacher, 2014), as well as open communication and inclusive teaching methods (Reich, 2014).

This chapter aims to demonstrate how participation, primarily through the concepts of human beings, attitude, communication, and inclusive teaching methods,

can contribute as a central empowerment strategy to strengthening the voices of marginalized students in schools and classrooms, thereby enabling genuine participation. Theoretical foundations, practical examples, and recommendations for action will be presented, highlighting the connection between inclusive education as a prerequisite for participation and the empowerment strategies presented.

2 Inclusive Education as a Prerequisite for Social Participation

Inclusive education is inextricably linked to the human right to equal access to education, which in turn enables social participation (Booth & Ainscow, 2017; Boban & Hinz, 2020; Prengel, 2019). Inclusion thus lays the foundation for democracy, equal opportunities, and, overall, a just society (Booth, 2010; UN-BRK).

2.1 Fundamental Principles and Theoretical Basis

The UN Convention on the Rights of Persons with Disabilities (2006) defines education in Article 24 as an inclusive right that must be realized in a system that enables all people to engage in lifelong learning and receive a high-quality education. This international legal basis, therefore, requires that children and young people, regardless of gender, ethnicity, disability, religion, and/or social status, have equal access to the general education system. A key prerequisite for the success of inclusion is, therefore, a change in the system itself (Degener, 2016). The aim is to design structures in such a way that all people can learn rather than requiring people to adapt to the system. This corresponds to the idea of the social model of disability and the phenomena of embodied diversity. This model is based on the assumption that discrimination arises from social processes and is not based on a diagnosable characteristic of those affected that deviate from the norm, as is the case in the medical model (Barnes, 2011; Bieling, 2019). Accordingly, it is not enough to implement individual support measures; instead, structural barriers must be identified and removed (Boban & Hinz, 2020; Booth & Ainscow, 2017). The concept of inclusive education is thus based on the recognition of diversity as a social norm and resource. Tony Booth and Mel Ainscow, who created the internationally recognized reflection and development tool known as the *Index for Inclusion*, emphasize that inclusion means systematically identifying and removing barriers to learning and participation for all students, not just for specific groups (Booth & Ainscow, 2017; Boban & Hinz, 2020). Inclusion is thus a process that requires the further development of school cultures, structures, and practices to enable the participation of everyone (Booth & Ainscow, 2017). Prengel (2019) notes that diversity and equality are not opposites but rather somewhat mutually dependent, as people differ in their life situations and forms of expression yet are

equal in their rights. Inclusive education, therefore, is not about adapting to a norm but about valuing and promoting individual potential.

2.2 Social Participation Through Inclusive Education

The *Capability Approach* (Sen, 2020; Nussbaum, 2015) provides a theoretical framework for linking education and participation. It states that granting formal access to educational opportunities is not enough. Instead, it is about developing the capabilities that people need to get involved, act independently, and help shape social processes. Thus, in addition to enabling formal access and individual opportunities for self-realization (*capabilities*), the capability approach also focuses on their realization through actual actions (*functionings*), with an emphasis on people's freedom of choice and the corresponding respect for their self-determination. Inclusive education strengthens these capabilities by recognizing diversity as the norm, seeing it as an enrichment, and utilizing it as a resource, thereby also taking into account the individual's contextual conditions (Nussbaum, 2015; Albert, 2022). Schools are central places where children and young people gain social experiences, develop a sense of belonging, and acquire democratic skills (Prengel, 2019; Boban & Hinz, 2020). Teaching all children together, regardless of their backgrounds, fosters the ability and willingness to empathize, show solidarity, and navigate diversity. These are essential prerequisites for a democratic society (Booth & Ainscow, 2017; Boban & Hinz, 2020).

At the same time, empirical studies, such as those by IGLU and the OECD, demonstrate that educational success continues to depend heavily on socioeconomic and cultural factors (OECD, 2012; Ludewig et al., 2021). In this context, Kremsner and Proyer (2019) draw attention to subtle mechanisms of marginalization, which they refer to as '*Beanderung*'. The term is derived from the English word ‚othering', which was coined in the context of postcolonial studies by Edward Said (1978) and Gayatri C. Spivak (1985). The principle of distinguishing between ‚us' and ‚them' describes processes that push people into a position that deviates from socially constructed norms (Riegel, 2016). The unequal distribution of educational opportunities thus contradicts the ideal of equal opportunities.

Inclusive education can help reduce these inequalities and mitigate discrimination and social exclusion, if it is structurally embedded, supported by personnel, and didactically reflected (Booth & Ainscow, 2017; Boban & Hinz, 2020).

2.3 Structural Requirements and Challenges

Booth and Ainscow (2017) emphasize the need to identify and break down barriers at all levels of the system. The *Index for Inclusion* provides specific questions

for reflection and indicators to promote inclusive development systematically. Since inclusion means that individuals do not have to adapt to existing structures but rather that structures are designed in such a way that everyone can participate (Prengel, 2019; Booth & Ainscow, 2017); Boban and Hinz (2020) call for adaptable structures and participatory processes that respond to different starting points and needs. Essential prerequisites for such structures include accessibility (Booth & Ainscow, 2017), appreciation and respect for diversity (Prengel, 2019; Albert, 2022), participation (Boban & Hinz, 2020; Booth & Ainscow, 2017), professionalization of teachers about inclusive and diversity-sensitive approaches (Booth & Ainscow, 2017; Prengel, 2019) and resource provision (Boban & Hinz, 2020). Challenges remain, including a lack of resources, ingrained patterns of exclusion, and uncertainty among teachers. Inclusive education, therefore, requires ongoing development processes and the appropriate attitude and willingness of all those involved. Empowerment is needed to enable equal opportunities and participation for all students. In the context of inclusive education, empowerment means, among other things, breaking down barriers and designing structures and practices that enable participation, for example, through an appreciative attitude, dialogical communication, and inclusive teaching methods.

3 Participation as an Empowerment Strategy for Inclusive Education

Participation is the foundation for achieving inclusive education, as it enables marginalized groups to make their voices heard, experience a sense of self-efficacy, and actively shape their participation in society. In educational institutions, mainly, participation is a central principle that not only enables it but also makes democratic values tangible in everyday teaching. Participation must be practiced at all levels, including in the classroom, at school, and within the education system. The following section examines how the concepts of human beings, attitudes, dialogical learning spaces, and the design of learning environments, as well as didactic-methodological approaches, facilitate participation and how these approaches are interrelated.

3.1 Concept of Human Beings and Attitude as the Basis for Inclusive Practices

The basis of inclusive education and a prerequisite for participatory processes is a differentiation-sensitive concept of humanity that understands diversity as usual and enriching (Prengel, 2019). Such a concept of humanity is powerful because it takes a positive view of the diversity of learners, thereby creating conditions for

all learners to participate equally in education. Sabine Albert (2022) shows in her empirical study that teachers' concept of humanity, as perceived by students, is central to the design of participation. She assumes that concepts of human beings consist of descriptive and normative beliefs, i. e., unconscious assumptions about how students *are* and how they *should be*. These beliefs, which arise from previous social experiences and the underlying values, shape the inner attitudes and influence the emotions of teachers. The fundamental inner attitude becomes evident when people react specifically to situations and individuals. This attitude is then reflected in practices, such as how teachers shape relationships, manage learning processes, or respond to challenges. If teachers primarily define their students by their perceived deficits (e. g., learning difficulties, behavioral problems), this leads to practices that severely restrict participation. An attitude that sees diversity as a resource enables dialogic interactions and democratic decision-making processes. Albert's study shows that teachers with a humanistic view of humanity (focus on equality, dignity, and potential for development) form more respectful relationships and involve students more. Against this background, Albert advocates a view of humanity based on respect for diversity (Albert, 2022).

Prengel (2016) argues similarly, viewing a dialogical, respectful, and reflective attitude as a necessary foundation for developing an inclusive school and teaching culture. Crucial to inclusive practice is the conviction that all people are capable of learning and deserve an equal place in society. This conviction is expressed in a constructive approach to heterogeneity, trust in everyone's ability to learn, and a willingness to critically reflect on one's assumptions and notions of normality. Here, too, it becomes clear that inclusive education can only succeed and enable genuine participation if internalized attitudes recognize and value the diversity of learners. Booth and Ainscow (2002) summarise these considerations in the concept of an *inclusive ethic*, which is described in the *Index for Inclusion*. This ethic shapes not only the design of lessons but also the design of collegial cooperation and school development, thereby systematically creating structures that enable equal participation. Only when this understanding permeates both individual attitudes and institutional structures can genuine educational and participation opportunities for all arise.

Attitudes and the underlying concept of human beings held by teachers emerge in interaction with biographical experiences, institutional conditions, and social expectations (Vonken et al., 2021), influencing pedagogical action and inclusive practices. On the other hand, actions can, in turn, induce, reinforce, or dampen the concept of human beings and attitudes (Albert, 2022). The development and sustainable internalization of an inclusive attitude, therefore, require professional support, spaces for reflection, collegial exchange, continuous training, and further education, and the support of school management to identify deficit-oriented images, power asymmetries in the classroom and implicit norms and replace them with empowering perspectives (Booth & Ainscow, 2017). Only

through the combined efforts of developing individual attitudes and institutional change can inclusive education become effective in terms of social participation.

3.2 Opening up Dialogue-based Spaces for Co-design

Teachers' views of human nature and their attitudes influence their communication and interaction with students. Attributions, implicit prejudices, and corresponding expectations on the part of teachers affect students' behavior and performance, as Staats (2016) concludes from the results of numerous studies on this topic. Rolf Dubs (2009) also impressively illustrates, in the form of a cycle, how teachers' expectations affect students' performance, behavior, and self-concept, thereby confirming the impact of teachers' expectations. Expectations can have adverse effects, but they can also be consciously used to empower young people. This makes the manner of communication and interaction, as well as the establishment of relationships that promote learning, even more important. Open and equal communication enables the diverse perspectives of students to be acknowledged and fosters a respectful exchange (Albert, 2022). Historically, the concept of dialogical spaces has its roots in Socratic maieutic. According to Socrates, people can arrive at their insights and thus shape their lives independently. This is precisely where his dialogue comes in, which triggers a process of insight through targeted questions and critical reflection (Böhm, 2010). This tradition was taken up and democratized by Paulo Freire (1998). For him, dialogue is a way of overcoming social inequality. Freire emphasizes that genuine education can only take place in dialogue when teachers and learners seek knowledge together as equal partners. He, therefore, understands education as a dialogical, joint process aimed at emancipation and empowerment.

In the context of inclusive education, communication is, therefore, of central importance. Inclusive forms of communication create spaces for understanding in which differences are recognized and belonging is made possible. Such spaces are necessary to provide all learners with equal opportunities to participate in learning. Genuine participation is based on mutual understanding, recognition, and joint negotiation. In this context, Albert (2022) emphasizes that teachers and learners must use communication to draw closer to each other, thereby discovering together what students need to learn effectively. Both Albert (2022) and Vonken et al. (2022) emphasize the importance of communication and dialogue as key teaching and diagnostic tools for understanding students within their life situations, taking their emotions and needs seriously, and showing empathy. Only through attentive listening and interested questions from teachers can all those involved find common solutions to learning problems. In order to create a shared space in which new meanings and solutions can emerge that go beyond previous points of view, David Bohm (2005) argues in his understanding of genuine

dialogue that assumptions should be kept in suspension, i. e., made conscious and left open in the room without being evaluated or defended, and only then should attempts be made to understand one's own and others' perspectives.

If teachers approach their students with open expectations, they can discover what the students are truly like and thus distance themselves from judgments, disparagement, and discrimination. Empowering, strengthening, and encouraging students means taking an interest in them, being attentive and mindful, identifying their needs, and showing respect and appreciation. It is essential to establish a shared language to support students in a targeted and effective manner. The educator Janusz Korczak (1998) compares young people to 'Pergament, dicht beschrieben mit winzigen Hieroglyphen, die du nur zum Teil zu entziffern vermagst; […]' (Korczak, 1998, p. 5).

This perspective is also in line with the *Capability Approach* (Nussbaum, 2015), which posits that, in addition to the internal resources of young people, the social context must also be considered to transform their potential into actual opportunities and freedoms. Only through joint dialogue young people can be empowered to shape their lives in a self-determined, responsible, and effective manner. Dialogic spaces are thus an expression of a fundamental attitude that understands diversity as a resource and consciously dismantles power asymmetries (Booth & Ainscow, 2017; Prengel, 2019), thereby enabling inclusive educational processes.

3.3 Creating Learning Environments for Participation

Examining the evolution of didactics and lesson design, the following paradigm shift is evident: from teacher-centered knowledge transfer to learner-centered empowerment practices that promote self-determination, participation, and social responsibility. Didactic models that take into account the basic needs for autonomy, competence, and social belonging, according to Deci and Ryan (1993), not only enable better learning outcomes but also the development of mature, committed personalities.

3.3.1 Self-determination as a Guiding Principle of Didactic Development

Self-determination theory (Deci & Ryan, 1993) provides the theoretical basis for modern pedagogy. It outlines the three key needs of students that must be met to increase their intrinsic motivation, which is ultimately crucial for the quality of learning, well-being, and personal growth. The need for autonomy is met when students act independently, have choices, and can participate in decision-making. Experiencing competence is about feeling capable and effective, which can be achieved when success is achieved through appropriately challenging tasks.

Social connectedness involves experiencing a sense of belonging, appreciation, and connection with others. It is about being part of society, maintaining supportive relationships, and feeling accepted and understood. Wolfgang Klafki (1996) already understood education in his critical-constructive didactics as an active process of self-determination, co-determination, and solidarity. In this didactic approach, inclusion and participation seem to be constitutive components of an educational theory understanding of democracy and humanity. A prerequisite for this form of education is the ability and willingness to represent one's convictions, values, and decisions while remaining open to criticism and alternative perspectives. The skills emphasized by Klafki – critical thinking, argumentation skills, empathy, and networked thinking – can be directly linked to the three basic needs of self-determination theory: they promote autonomy through reflective positioning, competence through argumentative action, and integration through empathic understanding. In this context, Klafki considers it important for young people to engage with the key issues of their time. Schulz and Otto also emphasize the central importance of autonomy, solidarity, and competence in their teaching and learning theory (Jank & Meyer, 2014). In inclusive educational settings, these three dimensions can be understood as benchmarks for a practice that recognizes diversity as a resource and provides all learners with active opportunities to participate in shaping their learning. In his dialectical didactics, Klingberg (1989) emphasizes that the balance between pedagogical guidance and self-regulation on the part of learners is the real driving force behind the teaching process. In this sense, participation means not only co-determination but also shared responsibility. Learners are taken seriously as subjects of their learning processes. Arno Combe (2018) points out that the opening of teaching required for inclusive didactics often fails due to uncertainty, for example, due to fear of unpredictable interactions. However, this opening up is crucial to create space for autonomous decisions and cooperative forms of learning.

With his agile didactics, Christof Arn (2020) advocates a form of teaching that responds to the needs of learners in a situation-specific manner, thereby focusing on the active presence of the teacher. In his approach, he specifically addresses the dimension of embeddedness, which can thus be traced back to self-determination theory in an integrative manner. Communication and relationship building are emphasized in critical-communicative didactics (Winkel, 2006) and relationship didactics (Miller, 2003) as essential elements of a successful, inclusive learning process. They not only enable a differentiated view of content transmission but also make the quality of the pedagogical relationship a central didactic category. Finally, in dialogical didactics (Ruf & Gallin 1998), learning is understood as a collaborative process of understanding based on a hermeneutic exchange between the I, you, and we, thus anchoring participatory structures in the classroom. Inclusive education, geared towards participation, therefore requires teachers to adopt an attitude characterized by respect, openness, and a

fundamental humanistic and democratic understanding. This creates a pedagogical climate in which autonomy, competence, and social integration are actively promoted as necessary conditions for participation and successful educational processes in line with self-determination theory.

3.3.2 Living Participation – Designing Lessons Together

Following constructivist principles, learning is an active construction process in which learners build their knowledge through individual experiences and reflection (Piaget, 1970). The co-constructive approach expands this idea to include the social dimension, which states that knowledge is created through dialogic interaction between teachers and learners (Ruf & Gallin, 1998). Dialogue and communication are also crucial, as teachers and students collaborate to address the diverse backgrounds and needs of their students. This also requires flexibility on the part of the teacher, as called for in *Agile Didactics*. Christof Arn (2020) emphasizes iterative processes, learner empowerment, and adaptability to individual needs. The core principles here are that teachers and learners design lessons together and that teachers respond to situations and the current needs of learners in the classroom. This requires teachers to adopt an attitude that is geared towards cooperation and joint learning processes. Teachers contribute their knowledge but are also willing to develop new learning strategies in collaboration with learners and to learn from them. Learning is understood as a subjective process, which explicitly allows for individual differences in the joint learning product. Learners are taken seriously as active co-creators of the lesson. Their perspectives and potential are valued as valuable contributions that are used for joint learning. The decisive factor is not who is right or who impresses but what helps the learners in their process. At the same time, the teacher is responsible for a respectful and transparent culture of communication and cooperation. Didactically, this requires openness to individual approaches and topic reconstructions, a constructivist attitude, the teacher‘s role as a supportive counterpart in the sense of coaching, and a democratic attitude that enables participation. The focus is not on the authority of knowledge but on the joint search for knowledge (Arn, 2020).

One way of implementing these principles in the classroom is the didactic approach *Universal Design for Learning (UDL)*, which was developed in 1990 by David Rose and colleagues at the *Center for Applied Special Technology* (CAST). This approach involves designing learning environments that are accessible to all learners, regardless of their prior knowledge or experience. Three principles are central to this approach: 1. Multiple modes of presentation – content is conveyed in different ways. 2. Multiple modes of expression – learners can demonstrate their knowledge in different ways. 3. Multiple modes of engagement – different ways of motivating and actively involving learners are offered. UDL shifts the

focus away from learners' deficits and towards barriers in lesson design. Initially developed for students with disabilities, this approach now benefits all students through flexible and inclusive learning settings. Inclusive didactics, according to Kersten Reich (2014), also pursue this goal by recognizing the diversity of students and focusing on individual support. This requires differentiated methods, and a flexible learning environment tailored to meet the diverse learning needs and interests of students.

The practical implementation of participation, diversity, and shared responsibility is particularly evident in Tom Bieling's (2019) *cross-functional approach* and the *inclusive research* by Kremsner and Proyer (2019). Bieling's *cross-functional approach* requires teams from different disciplines and diverse perspectives to collaborate on developing innovative solutions to real-world challenges. In the classroom, this means that students with different strengths, interests, and backgrounds work on projects in heterogeneous, cross-functional groups. The teacher designs learning environments that leverage this diversity as a resource, allowing all members to actively contribute to problem-solving (Bieling, 2019). *Inclusive research* by Kremsner and Proyer applies this principle to the development of lessons. Here, students are actively involved in planning, implementing, and reflecting on lessons as experts in their life situations. Together with teachers, they identify relevant questions, analyze barriers, and develop solutions from their perspectives (Kremsner & Proyer, 2019). This participatory approach is consistent with cross-functional thinking in that it systematically integrates different perspectives and distributes responsibility. The same applies to entrepreneurship education, which explicitly promotes skills such as problem-solving, creativity, initiative, teamwork, and responsibility. These skills are important not only for starting a business but also for leading a self-determined and responsible life. The Austrian *TRIO model* distinguishes between three levels: 1. Core entrepreneurship, which involves developing entrepreneurial skills and independence; 2. Entrepreneurial culture: promoting a culture of openness, creativity, empathy, and sustainable innovation; 3. Entrepreneurial civic education: strengthening maturity, autonomy, and social responsibility (BMB, 2025).

The approaches and models presented contribute to developing ideas and providing incentives for action on how teaching can be designed to promote learning and be inclusive at the same time. They demonstrate ways to accommodate individual requirements, break down barriers, and facilitate participation for all learners.

3.3.3 Best Practice Examples from Vocational Schools in Austria

In Austria, inclusive education is more widespread in compulsory schooling (from the age of 6 to 14) because all children are taught together, with no restrictions on access. In upper secondary education (schooling from the age of 14 to

19), particularly in vocational schools (schools that focus on practical skills) and general secondary schools (schools that focus on academic subjects), selection procedures and performance-based admission requirements ensure more homogeneous classes and exclude many students who do not meet the norm. In addition, the necessary structures and resources for inclusive settings are often lacking. This makes it even more worthwhile to examine best practice examples from vocational middle and upper secondary schools, demonstrating that it is also possible to design inclusive lessons at these schools.

The *integrative school center HTL HAK Ungargasse (SZU)* in Vienna is a unique school where young people with and without physical or sensory disabilities are taught together according to the regular curriculum. The SZU attaches particular importance to equal opportunities, accessibility, and individual support. Integrative measures include smaller classes, individual support from support teachers, free tutoring, therapeutic and medical care, and barrier-free infrastructure. Students with disabilities are given priority for admission (*reverse integration*) to learn according to the regular curriculum but receive additional support to achieve the same qualifications as their classmates without disabilities. The aim is to promote mutual respect, social skills, and an inclusive attitude that benefits everyone *(https://www.szu-home.at/integration/*).

The *Learning Office at HTL1 Linz* is an innovative teaching concept that enables students to learn in a self-organized manner, at their own pace, and often through projects or team-based work. Teachers act as coaches and learning progress is documented and assessed individually. The aim is to promote personal responsibility, teamwork, and practical learning. A central element of the learning office (a place where students can work independently) are social projects that specifically promote team spirit, a sense of responsibility, and social commitment. For example, students support aid organizations by participating in construction projects or by joining campaigns, such as the *Long Day of Refugees* (a day of action in Germany and Austria), where they address issues including flight, asylum, and human rights. Such projects are firmly anchored in the educational concept and complement self-organized learning by strengthening social skills, empathy, and democratic awareness (*https://www.htl1.at/plus/*).

At the *Werkraumschule Bregenzerwald*, projects are continually carried out in collaboration with regional companies, resulting in works that benefit the community. Commercial training is combined with entrepreneurial thinking and craftsmanship. The students plan, organize, and implement the projects independently, thus acquiring both economic and practical skills. For example, the school's graduating class implemented a project in which students designed and built unique benches, memory games, and sensory stations for individuals with dementia. These installations promote movement, sensory perception, and interaction, thereby supporting the participation of older people in public spaces (*https://www.bws.ac.at/werkraumschule/*).

The *HTL1 Klagenfurt* is a pioneer in environmental protection, focusing on projects such as photovoltaic systems, green roofs, and e-mobility, in which students are actively involved. Sustainability and environmental protection are integral parts of the curriculum and school culture. Close cooperation with businesses ensures that lessons are practice-oriented, as current requirements and expertise are directly incorporated. At the same time, this creates financial conditions, such as through joint projects, sponsorship, or the provision of resources (*https://htl1-klagenfurt.at/*).

The *IT-HTL Ybbs* an der Donau attaches great importance to practical training, teamwork, and innovative projects. Lessons cover current topics such as big data, cybersecurity, web and app development, and 3D and game design. A unique feature is the weekly project day in the final year group, where students work in teams on real, often interdisciplinary, tasks using agile methods such as Scrum. The school promotes independent learning, personal development, and entrepreneurial thinking and has been recognized as an entrepreneurship school. Girls‘ empowerment and diversity are also specifically supported, for example, through the *Girls go for IT* program. The school is a modern, future-oriented institution that teaches technical, social, and economic skills in a practical manner (*https://www.sz-ybbs.ac.at*).

4 Conclusion and Outlook

Inclusive education and empowerment are essential prerequisites for a fair and democratic society. This can be achieved when schools see diversity as a strength, break down barriers, and enable all learners to participate fully. Empowerment-oriented approaches, ranging from participatory lesson planning and Universal Design for Learning to inclusive research and entrepreneurship education, demonstrate how learners can become active shapers of their educational pathways.

Schools should promote an inclusive attitude and embed participation in their structures. Barrier-free learning environments and multi-professional teams are important in this regard. Empowerment-oriented methods and continuous reflection on concepts of human beings and power relations also foster long-term inclusion. The *Index for Inclusion* (Booth & Ainscow, 2017) is an effective tool for promoting sustainable school development in inclusive education. In this context, teachers need to think outside the box and draw inspiration from best practice examples to enhance their teaching practice. However, it is also essential that they receive comprehensive support from school leadership and the broader education system to establish the necessary framework conditions, resources, and further training. A fundamental rethink is necessary at all levels, from school management and education policy to teaching practice, to sustainably anchor

and effectively implement inclusive education and empowerment across the board, especially in schools that are accessible to all.

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Chapter 6 | Global Citizenship Education as a Contribution to the Resilience of Democratic Societies

Ursula Maurič

Abstract

This chapter argues that, given the manifold threats to democracies, new priorities must be set for education. For "transforming our world" (United Nations, 2015), it will not be enough to equip learners with skills that could enable them to participate democratically in a globalized world with its crises and challenges. Instead, individual learning must be considered even more closely than before in conjunction with the equally important learning of the community in which the individual's learning is embedded. This is the key to democratic, socially and ecologically just, and therefore sustainable societies. The concept of critical and inclusive global citizenship education (*k. & i. GCE*) presented in this chapter supports democracy education based on ideas of community building with both local and global dimensions. The didactic principles of *k. & i. GCE* described in section 3.2, in turn, each contribute to strengthening social resilience through individual and collective learning.

1 Introduction

Democratic societies face enormous challenges in the 21st century. These include refugee and migration movements triggered by wars and the climate crisis, as well as the social, economic, and political consequences of historical colonialism and global market interests. The educational goal of enabling individuals to navigate such complex political, economic, social, and ecological systems and dynamic technological developments in order to be capable of making judgments and taking action is overwhelming for people. The longing for simple solutions to complex problems and an increasingly widespread feeling of existential threat, powerlessness, and lack of prospects leads many to seek stability and orientation in systems that are familiar and often hark back to an imagined better past. Nationalism and patriarchal worldviews are gaining strength, right-wing populist politicians are gaining influence and power, and commitment to democratic structures and values is becoming fragile. In addition, established ideas and structures of democratic participation often no longer do justice to the lives of people

in globalized societies. For Western democracies such as Austria, Füllekruss and Mecheril (2021) describe paradoxes that arise from nation-state concepts of citizenship. These do not correspond to the reality of globally networked migration societies and sometimes lead to discrimination and exclusion of certain groups with regard to their democratic participation. Elsewhere, such as in the successor states of the Soviet Union, democracy was primarily associated with hopes for a better life in individual freedom and with a break from Soviet history. With a strong focus on the economy and access to consumer goods, there was a failure to develop and bring to life ideas of democracy as a form of government in everyday life and in its social dimension (Krzywosz-Rynkiewicz & Kennedy, 2023).

In European discourse, democracy education is primarily understood as empowering individuals to become responsible citizens (e. g., Council of Europe, 2018), which suggests that the knowledge required for this is already available. Overall, global concepts of education for sustainable development in the sense of peaceful, socially just coexistence that ensures a good life for all focus on knowledge and skills that must be made accessible to all learners or acquired by them (United Nations, 2015, p. 17).

However, the concept of critical and inclusive global citizenship education (k. & i. GCE) (Maurič, 2024) presented in this article takes a slightly different approach. It focuses on how education can promote learning in the context of community in order to ultimately relearn democracy as a society. The aim is to gather and generate diverse knowledges within the community and to draw strength for tackling the major issues of our time. Last but not least, it is also about a differentiated and critical examination of global education discourses with regard to how education can effectively contribute to social transformation. Transformation here specifically means changing patterns of relationships, thinking, and action toward democratically conceived inclusion, participation, and co-creation. It leads to forms of being, thinking, and relating to one another (Andreotti, 2010; Stein & Andreotti, 2021) that offer an alternative to the experience of powerlessness and lack of prospects and the longing for simple solutions.

The task for a *k. & i. GCE* is therefore initially to perceive and evaluate local social reality in a differentiated manner, taking into account multiple global influences, to broaden narrow conceptions of democracy (Zyngier, 2020), and to open up alternative individual and collective spaces for thought and action for transformation. Another element is the individual and collective ability to relate to each other and to the natural environment. Among other things, this involves recognizing the imperfection of all knowledge as a constituent element of human coexistence. Furthermore, it is about de-hierarchizing knowledge in relation to cognitive and socio-emotional knowledge. The conceptual and intuitive, the abstract and the emotional complement each other and equally open up access to ideas of reality and possibilities for action (Escobar, 2020, p. 13). This places the ability to shape one's relationship to oneself, to others, and to the world

in a constant process of perception, observation, listening, recognition, interpretation, dialogue, and negotiation at the center of educational processes. This ability also changes the quality of the relationship (Maurič, 2024, p. 333). The goal of education is thus "to establish ethical relationships across linguistic, regional, ideological, and representational boundaries (i. e., to be open to the Other) and to negotiate principles and values 'in context'; and to enjoy their open and uncertain individual and collective learning journeys" (Andreotti, 2010, p. 241).

2 The Importance of Resilience in Democratic Societies in the Context of Global Crises

The preamble to the United Nations 2030 Agenda for Sustainable Development states: "We are determined to take the bold and transformative steps that are urgently needed to put the world on a sustainable and resilient path" (United Nations, 2015, p. 1). Concepts of transformation and sustainability are widely discussed in the literature on GCE. In the following, however, special attention will be paid to the significance of resilience for sustainable futures and democracy education, which has received less attention to date. The arguments in this chapter are inspired by and informed by findings from resilience research that point to a connection with the prerequisites for social participation and co-creation (Block & Block, 1977), where democratic values can be successfully anchored.

The importance of resilience for democratically organized societies stems primarily from a broad understanding of democracy, which recognizes it not only as a specific political, state-institutional form of government, but above all as a social idea (Himmelmann, 2022, p. 47 f.). Political philosophers of the 20th and 21st centuries (Dewey, 1938; Negt, 2011) describe democracy as a way of life that must be continually relearned and revitalized. German political scientist and political educator Gerhard Himmelmann sees democracy as a specific form of human, social, and political cooperation (Himmelmann, 2022, p. 47) that should not be regarded as a secure state of affairs or as an institutional agreement limited to the national level for the exercise of state power. Much is inherent in such an understanding of democracy that poses enormous challenges for individuals and communities alike. It leads to the conclusion that democracy must be viewed as an open, always incomplete, and never finished process in which issues are negotiated that sustainably determine and influence the lives of individuals and their environment in its economic, social, and ethical dimensions. Stress factors for democratic societies, such as global resource scarcity, the climate crisis, war, and migration movements, pose particularly dramatic challenges to how we as individuals and communities deal with crisis situations and unfavorable, threatening developments, and what strategies we can develop to make use of our ability to cooperate in the face of the changed situation. At the same time, it is important to acknowledge our own

imperfections – whether as a society or as individuals – in order to keep our curiosity and openness to alternatives alive. Here, the connection to the concept of resilience becomes particularly clear. Resilience is defined as a dynamic process that involves mobilizing individual and social resources to cope with stressful developments and situations and, beyond that, using crises as a starting point for development (OECD/Vodafone Foundation, 2018, p. 3). It is important to warn against a narrow concept of resilience that seeks to reduce difficulties and negative feelings instead of understanding them as an important part of the process.

Resilient development is multidimensional, associated with feelings such as fear, pain, and grief, and requires a great deal of strength (Fröhlich-Gildhoff & Rönnau-Böse, 2022, p. 13). This is an important starting point for designing educational processes for a *k. & i. GCE*. Phenomenological learning theory approaches point to the special potential for learning in terms of development and transformation that can lie in moments of uncertainty, fear, confusion, and helplessness. These feelings arise when the familiar fails and the new is not yet available (Meyer-Drawe, 2012, p. 15). Children and young people are confronted with the major challenges and contradictions of our society in their everyday lives. These include experiences of flight and migration, racism, social injustice, and unequal access to social and political participation. These issues are complex, and individual and collective experiences with them vary and are often unsettling. It is therefore important for educators to be able to address these issues and support children and young people in processing their experiences. As already noted, learning processes in this context can never be described as complete, just as resilience is not a static or permanent characteristic or ability. This brings the processual nature and the specific question of support factors for a successful process into focus. Resilience develops over time, just as ideas about democratic coexistence develop over time. The didactic principles of a *k. & i. GCE*, which will be explained in the next section, refer specifically to this.

3 The Concept of a *k. & i. GCE*

GCE can generally be described as a form of political education that places particular emphasis on how, under the conditions of globalization and the resulting contradictions and problems for nation-state-oriented societies, we can shape our coexistence in a complex, interconnected, and unjust world in a peaceful, solidarity-based, just, and sustainable manner. Democracy remains the best form of society and government for this purpose, but ideas about democracy need to be further developed and adapted to the new needs of globalized, in many aspects transnational societies. The concept of critical and inclusive GCE (k. & i. GCE) also continues the perspective of critical pedagogy with its vehement social criticism. From this perspective, capitalist modernity and neoliberalism as its global manifestation

are identified as the most important causes of social divisions (Bernhard, Rothermel & Rühle, 2018). This also refers to the continuation of colonial patterns of thought and action and the resulting legitimization of global hegemonic power and inequality. The postcolonial thinker Boaventura de Sousa Santos describes colonialism from a social science perspective as "a system of naturalizing differences in such a way that the hierarchies that justify domination, oppression, and so on are considered the product of the inferiority of certain peoples and not the cause of their so-called inferiority" (Santos, 2016, p. 18). This has very concrete implications for coexistence in local societies: "In Europe, racism, xenophobia, anti-Semitism, and Islamophobia are among the modalities in which we can see colonialism at work" (Santos 2016, p. 18). However, the continued fragmentation of societies, especially in culturally diverse migrant societies, poses a massive challenge to the democratic organization of coexistence. Counteracting this through a decolonizing educational practice in order to draw attention to forms of exclusion and marginalization and to counter them with inclusive social models is the aim of critical pedagogy and is at the heart of a necessary transformation.

In the context of schools, *k. & i. GCE* implies support and guidance in dealing with and organizing complex issues that concern children and young people in view of the concrete effects of capitalism and colonialism on their societies and, not least, their own lives. The aim is to develop alternative ideas, relationship patterns, and courses of action for shaping peaceful and sustainable coexistence on our planet (Maurič & Wagner, 2024). The following questions, among others, are significant in this context:

- How can education help young people to recognize and analyze exclusion, stigmatization, and racism on a global level and in their immediate environment, and alternatively develop ideas of inclusion?
- How can we succeed in giving all people a voice, regardless of their (social or geopolitical) origin, their religion or worldview, their ethnic and cultural affiliation, their age, their languages, their sexual identity, or their formal citizenship, when it comes to shaping their living environment and ultimately the possible futures for planet Earth?
- How can education support the ability to relate to oneself, to each other, and to nature in order to negotiate ideas of a good life for all in a dialogical and democratic manner in diverse and heterogeneous societies?

3.1 Concepts of Education

Impulses for a decolonial transformation of one's own ideas about the world with the help of a k. & i. GCE provides a contrastive analysis of global education discourses, their ideological foundations, and pedagogical implications.

Sant, Davies, Pashby, and Shultz (2018) describe seven such global education discourses, each of which refers to different worldviews (Sant, Davies, Pashby & Shultz, 2018, p. 127):

1. A neoconservative discourse recognizes the goal of education as the socialization of new generations with regard to national values. Globalization processes are viewed with great skepticism here. Apple describes this phenomenon as "pressing for a return to an imposed sense of nation and tradition that is largely based on a fear of 'pollution' from the culture and the body of those whom they consider the 'Others'" and argues: "Neoconservatives assume something that isn't there, a consensus on what should be "official" knowledge. They thereby try to eliminate one of the most significant questions that should be asked in our schools: what and whose knowledge should we teach? In their certainty over what a common culture is supposed to be, they ignore a key element in this supposed commonness. What is common is that we disagree" (Apple, 2017, p. 149).
2. Neoliberal discourse emphasizes skills such as flexibility and communication. This occurs against the backdrop of prioritizing unquestionable, permanent economic growth as the most important parameter of sustainable development. Neoliberalism as a form of global capitalism also has a significant influence on educational goals worldwide: "education in many countries is now a site for the development of homo economicus" (Block, 2018, p. 577). GCE programs are also affected by this, for example, when they contribute to increasing competitiveness in the global labor market (Goren & Yemini, 2017).
3. A discourse focusing on human capital sees people, with their knowledge and skills, as the driving force behind a country's economic development. Problem-solving skills and a sense of responsibility become important.
4. A discourse focusing on world culture places education in the context of humanistic ideas and corresponding socialization. The starting point is the idea of a world culture in which all cultures merge. Universal human values and norms such as human rights, democratic values, diversity, and sustainability are central. In educational practice, conflict resolution skills take on particular importance.

These first four educational discourses focus primarily on individual learning and successful socialization. Furthermore, Sant, Davies, Pashby & Shultz (2018, p. 127) also describe transformative educational discourses that focus on subject formation and engagement against injustice, and where individual learning can contribute to larger collective processes of change. Critical thinking and deliberative skills are important for (5) liberal, (6) radical, and (7) postcolonial discourses. Beyond critically examining global inequality and inequity, postcolonial discourse draws attention to the fact that globalization leads not only to

economic and social discrimination worldwide, but also to cultural and political discrimination. Forms of exclusion, marginalization, discrimination, and above all racism come into focus. Postcolonial theories also criticize humanism as the Western philosophical basis of education because of its universal assumptions. GCE and the ideas behind it also contain another concept that is rooted in humanistic universal ideas and runs the risk of reproducing hegemonic power and inequality. José Cossa demands: "[…] in order for us to advance a globally just perception of global citizenship, we need alternatives that do not build on modernity or postmodernity and are not confined to a humanistic perception of human" (Cossa, 2021, p. 21 f.).

A *k. & i. GCE* therefore involves a reframing of humanism that incorporates pluralistic worldviews. It represents a goal for political learning without claiming to formulate a universally valid interpretation of GCE. Rather, this concept offers guidance on how dealing with the constantly incomplete and open must become part of an educational practice that contributes, on the one hand, to making democracy tangible as a way of life and form of government and, on the other hand, to expanding ideas that take social developments in a globalized world into account. Above all, however, learners should be empowered to see themselves as significant and effective individuals as well as part of a community that recognizes diversity as a unifying feature. Ultimately, the goal must be to enable them to help shape the further development of democracy under the banner of pluralism. The great challenge is to use education not to promote the reproduction of universal ideas about the future that can never do justice to the philosophical, social, and political potential of a pluralistic society, but rather to promote its division (Maurič, 2024, p. 63). A critical examination of one's own worldview, its roots and philosophical basis, and the resulting patterns of thought and action forms an important foundation for this (Maurič, 2024, p. 64).

3.2 The didactic principles of a *k. & i. GCE*

The didactic principles of a *k. & i. GCE* (Maurič, 2024, p. 118) should provide a framework for this:

1. Subject and process orientation refers to a constructivist learning theory approach that places the subjective ideas of learners at the beginning of learning processes (Kleinschmidt/Lange 2021). The results of learning processes are the outcome of preliminary individual qualification and socialization processes. And the basis for new learning processes.
2. The perspective for supporting learning processes focuses on potential orientation based on a positive view of human nature (Frick 2007, 2011). Jürg Frick

speaks of the power of encouragement. And thus, of a view of human nature that supports this subject and process orientation.

3. Cognitive justice is a core element of a *k. & i. GCE*. It requires the recognition of a diversity of forms of knowledges (see e. g. Shultz, 2018). In his reflections on social transformation, Santos states: "Alternatives are not lacking in the world. What is indeed missing is an alternative thinking of alternatives" (Santos, 2016, p. 20). The lack of alternative thinking about alternatives is part of a world increasingly characterized by discrimination and exclusion, in which colonial structures and ways of thinking have by no means been overcome. Accordingly, there is a need for critical reflection on, among other things, what knowledge currently remains unused in addressing global and socio-political crises. Through an alternative perspective on knowledge that can support transformation, patterns of thought and action based on dominant capitalist, Eurocentric, and patriarchal ideas of society must first be broken down (Santos, 2016, p. 21). The aim is to critically address the marginalization and hierarchization of knowledges. And it is about recognizing the imperfection of all knowledge. Apple (2017, p. 149) also asks, in relation to education, who determines the knowledge, values, and skills needed to empower learners for sustainable futures. For Apple, ideas of the common good, of what is equally valid for all people, are fundamentally suspect. In a world shaped by hegemonic, Eurocentric, national, colonial patterns of thought and action, he sees this as nothing more than a form of suppression of the knowledge of those whose voices are not heard, who are stigmatized as strangers, as not belonging.
4. Pluriversal dialogue (Maurič & Scherling, 2021) refers to the need to develop and strengthen the ability of teachers to moderate dialogues in the sense of cognitive justice. This includes developing the ability to translate between cultures and, associated with this, the willingness to engage in a never-ending examination of the inner concepts hidden behind terms (Santos, 2012, p. 43). To this end, there is also an urgent need in the educational context to revalue socio-emotional knowledge, which attaches particular importance to the connection between our emotions and our ability to relate to others.
5. The didactic principle of "learning to unlearn" (Andreotti, 2010) places high demands on pedagogy to enable changes in mindsets and the patterns of behavior that depend on them. In this context, Andreotti speaks of a necessary transformation of forms of being, thinking, and, above all, relating to one another.
6. Furthermore, it is the social responsibility of schools and universities to create an appropriate environment, a critical public sphere (Santos, 2012; Fraser, 2017) for GCE, where learning that empowers social participation can be experienced. To this end, appropriate individual and institutional self-reflexivity must be developed (Maurič & Scherling, 2021).

4 Impulses for Educational Practice a *k. & i. GCE*

All too often, we fail to consider that children and young people develop ideas and knowledge about the state of the world at an early age. These ideas and knowledge are shaped by their social environment, personal experiences and interpretations, and the media, which convey information about global conflicts, climate change and the resulting refugee and migration movements, as well as social crises. In formal education, there is usually far too little time to share and critically examine the ideas, concerns, fears, and hopes of children and young people. Furthermore, not all of them receive support from their families in dealing with these issues. In order to explore and understand the world in all its complexity, many perspectives and thoughts, as well as many different experiences and starting points for learning, need to be incorporated. In the context of education, resilience is also apparently promoted in particular by a positive school climate – including trusting relationships, open communication, and motivating leaders – but also by teaching socially disadvantaged and privileged students together (OECD/Vodafone Stiftung, 2018, p. 7 f.).

For educators, this means first and foremost finding ways and methods to give all children and young people a voice, to share their ideas and experiences, and to learn from one another. Linguistic diversity should not be an obstacle to this. Not only the ability to communicate, but also the ability to listen must be strengthened beyond the boundaries of one's own language. To this end, formal, school-based, and non-formal learning settings, such as those offered by leisure education, can complement and enrich each other (Maurič & Wagner, 2024).

Furthermore, cooperation between educators from different educational fields can give rise to a new perspective on learners, which generally changes and enriches teaching and learning at school, not only in the area of GCE. To illustrate how the didactic principles of a k. & i. GCE described in section 3.2 can be implemented in educational practice, a few didactic approaches and methods are listed below as examples.

4.1 Children and Young People as Learners of a *k. & i. GCE*

Philosophy for Children (p4c) is a useful tool for strengthening understanding of complex social contexts while taking into account the many perspectives that children and young people bring with them from their different backgrounds and experiences in their social environment. This methodological approach is effective for cognitive as well as socio-emotional learning when it is carried out regularly as part of a lived school culture and when certain quality criteria are observed (Maurič & Thielmann, 2022, p. 131). This includes creating a trusting space where everyone has a voice. Sitting in a circle allows everyone to meet on

equal terms. The children and young people decide which questions are important and will be discussed. Everyone makes sure to listen to each other and asks questions if something is unclear. Educators do not impart knowledge, but are themselves questioners and learners. They support children and young people in contributing their questions, experiences, and ideas regardless of their linguistic repertoire and moderate the discussion.

Questions and concerns of children and young people on political and social issues can be formulated together and made visible and audible in the school building as well as in the school environment. Children's books on topics of global importance can serve as a starting point for this. Using the example of linguistic diversity and research into its significance for society, it could be explored whether all languages are given space inside and outside of school (Maurič, 2022).

Finally, the Future Workshop method is very effective in enabling alternatives for equal coexistence and supporting opinion-forming and co-determination (Zurstrassen, 2022). This method takes time, but it opens up the perspective for children and young people that the present and the future can be shaped. While there is no fixed repertoire of methods for its implementation, the process is clearly structured into (1) a preparation phase, (2) a criticism phase, (3) a utopia phase, (4) an implementation phase, (5) a reflection phase, and (6) a workshop phase. The latter comprises a selection of measures to achieve the desired state. This also includes regular evaluation of the current state and adjustment of the implementation strategies.

GCE always means supporting personal development. Creating mindful learning spaces is an important prerequisite for this (Maurič & Wagner, 2024). Important elements of such learning spaces include measures for self-care (for educators as well as children and young people), mindful moments for dialogic learning, safe places of retreat, exercises to support mindful language, and the establishment of binding agreements that structure coexistence in the shared learning and living space of the school and make it as safe and motivating as possible for everyone (Maurič & Wagner, 2024, p. 101). These measures help to ensure that often difficult and stressful issues that concern children and young people in their lives and have complex causes and effects can be dealt with together.

4.2 Educators as Learners of a *k. & i. GCE*

Teachers are important role models for young people and form a particularly relevant social environment for their learning. They increasingly reflect the social diversity that characterizes migrant societies. They themselves, albeit in different ways, are confronted in their private and school lives with the democratic paradoxes that arise from the contradiction between homogeneous ideas of society and a reality shaped by diversity (Füllekruss & Mecheril, 2021). Some of them

also carry trauma and injuries resulting from this confrontation. This makes it all the more important to create the mindful learning spaces mentioned in the previous section for them as well.

Just like their students, teachers bring certain ideas and interpretations of the world into the classroom, which in turn form the starting point for their personal, ongoing learning. In a global study on teachers' ideas about how education can promote a democratic culture, Zyngier asks how education can promote a democratic culture. Most of the teacher training students, school teachers, and university lecturers surveyed for this study demonstrated a narrow understanding of democracy. A narrow understanding refers primarily to representative structures and elections as opportunities for democratic participation by citizens. However, it ignores other perspectives that may be helpful for a *k. & i. GCE*. These include, for example, Himmelmann's differentiation between democracy as a way of life, a form of society, and a form of government (Himmelmann, 2022).

Added to this is the importance of the local perspective of a *k. & i. GCE*. It makes a difference whether teachers in Vienna, Seoul, or Panama design democracy education in the sense of a *k. & i. GCE* for their school and their lessons. They analyze phenomena such as globalization and migration as the socio-political framework conditions of the specific society in which they live and work. They expand their ideas about coloniality in the reality of their schools. How does all this determine their everyday lives and those of their students? Which voices are heard? Which are not and why?

Several aspects are relevant in teacher training for a *k. & i. GCE*:

On the one hand, it is important to support teachers in conceptualizing a k. & i. GCE in the context of the respective subject didactics. Based on a change of perspective on participation and involvement in the migration society, which breaks with normative traditional ideas and recognizes democracy as a process and subject to change (Füllekruss & Mecheril, 2021; Kleinschmidt, Kenner & Lange, 2019; Zyngier, 2020), the understanding of education must also be critically deconstructed and reconstructed in order to reposition democracy education within it. This, in turn, requires a conscious shift toward concepts of critical pedagogy and thus also toward critical GCE.

Didactic approaches and methods that integrate diverse forms of knowledge, i. e., cognitive, emotional, and relational knowledge, into political education and democracy education (Escobar, 2020; Stein & Andreotti 2021) take on particular significance.

5 Conclusion

There are no new insights at the end of this chapter. All of the arguments have already been described many times in the literature. However, the connections

between GCE and democracy education presented here may make a further helpful contribution to implementing a necessary paradigm shift in education, which primarily involves de-hierarchizing different forms of knowledge and thus also placing greater emphasis on socio-emotional knowledge.

Resilience research focuses on the resources and protective factors that help people process negative emotions and cope with situations. These include stable social bonds, high social skills, and positive self-efficacy expectations (Fröhlich-Gildhoff & Rönnau-Böse, 2022, p. 16). If these are lacking, the resulting stress factors increase the individual's vulnerability and reduce their resilience. Poverty, low socioeconomic status, lack of social support, conflicts, war, and natural disasters, on the other hand, represent the major social risk factors (Thun-Hohenstein, Lampert & Altendorfer-Kling, 2020, n. p.). The core concern of k. & i. GCE is that education to strengthen the resilience of democratic societies must also and especially involve and strengthen learners' ability to relate to themselves and their environment, to recognize and tolerate ambiguities and imperfections in themselves and others. This presents a great opportunity to develop visions for the future in which the self is recognized as part of the community and thus part of a larger whole. Ultimately, therefore, it is not a matter of constantly searching for new theories and methods in educational practice. It is about perceiving learning as a social process and placing it in a larger context. On the one hand, the learning of the individual must be shaped by every day and consistent experiences of a democratically oriented community. At the same time, individual learning contributes to different forms of knowledge for the formation and strengthening of such a community.

As a form of political education, k. & i. GCE should ultimately strengthen learners' ability to question worldviews and thought patterns that underlie forms of inclusion and exclusion. An important goal is to broaden ideas of democracy and democratic participation in globalized societies. In the context of teacher education, this means critically examining worldviews and related patterns of thought and action and their significance for pedagogy. The goal is to transform educational practice in the classroom and beyond in educational institutions.

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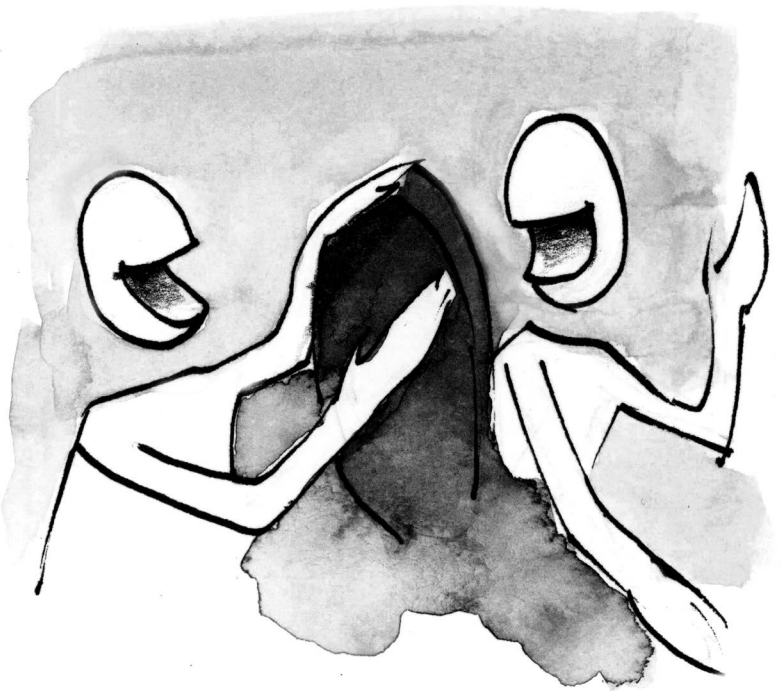
Part III | Future Competences and Skills



Drawing by Stefanie Egger

Chapter 7 | Future Competences: Skills for Tomorrow – and Why they are Important Today

Manfred Pfiffner & Saskia Sterel

1 Working Environment

The current rapid changes in society, the economy and the world of work are primarily based on the process of technologisation and digitalisation. Although this trend has been manifesting itself since the 1970s, the increasing networking of production processes on the one hand and the provision of generative artificial intelligence to the public since the end of 2022 on the other hand can be considered new (Hassler, Sterel & Pfiffner, 2024; Sterel, Pfiffner & Caduff, 2016). This tangible change can be characterised both by increased complexity and by accelerated dynamics. In addition to the evident global and national phenomena, such as climate change, increasing urbanisation, globalisation and also de-globalisation, and demographic change, increasingly confusing, mutually influential transformation processes are emerging at the socio-structural level that exert a strong influence on individuals (Deffte & Frühling, 2021).

The above described complexity which has a strong influence on the world of work and on everyday life requires new skills. These include, in particular, the ability to deal flexibly with uncertain situations, to make decisions in ambivalent environments and to recognise failure as a possible option. All these are aspects of behaviour that help to be resilient in the so called VUCA world which is an acronym for 'Volatility', 'Uncertainty', 'Complexity' and 'Ambiguity' (Heller, 2019).

In today's world, the VUCA concept has become a key term for describing the challenges of the current environment. The 'V' stands for 'volatility' and paints a picture of a reality that can be described as unpredictable and erratic. The instability of conditions complicates long-term planning and reliable forecasting due to the high volatility of developments and events. The constant adjustment of the actuators is therefore necessary. The 'U' stands for 'uncertainty'. This describes how difficult it is to predict future events, as less reliable information about future trends is available. In such an uncertain climate, people must learn to work and develop effective strategies despite a certain lack of clear forecasts. The letter 'C' focusses on 'complexity'. It refers to the complex and multi-layered aspects of the modern world, in which simple cause-and-effect relationships are rarely observed. The interaction of a multitude of factors makes it more difficult to predict the effects of decisions and increases the complexity in the problem-solving

processes. Finally, the 'A' stands for 'ambiguity', which emphasises the complexity and scope for interpretation within the context in which one has to operate. Ambiguity implies that available information often allows multiple interpretations, it makes decision-making more difficult and increases the potential for misunderstandings (Bennett & Lemoine, 2014; Johansen, 2012; Lenz, 2019).

In 'Workmonitor 2025', the CEO of Randstad points out that in a VUCA world, it is crucial to prioritise work incentives over salary, as work-life balance becomes the main motivation – an indication of the change brought about by volatility and uncertainty. The need for community becomes even more important in a world of complex work. Working environments should include trust, personalisation and upskilling in order to retain talent and remain adaptable and competitive in a complex world (van t' Noordende, 2025).

The emphasis on flexibility and the human element in the workplace provides a bridge to the challenges posed by demographic change. In the VUCA world, demographic change is one of the major challenges for the European Union – an example of the complexity and uncertainty that societies and companies must consider. The European Commission emphasises the need to manage this change in order to ensure the future prosperity and well-being of the EU. In particular, population ageing, the decline in the working-age population, which is partly associated with skills shortages, and increasing regional disparities between urban and rural areas, demonstrate not only the complexity but also the uncertainty and volatility associated with socio-economic change. The effects of global warming and environmental deterioration, such as extreme weather events, demonstrate volatility, as they directly impact demographic change and thus contribute to increased mortality, chronic illnesses and migratory movements. These developments represent ambiguity and unforeseeable consequences.

The demographic shifts also raise questions regarding the demand for care services and the long-term financial viability of welfare states – a sign of uncertainty. Furthermore, the decline in the working-age population highlights the importance of adaptability – a key issue in a VUCA world – in terms of activating existing talent and investing in skills across generations. Targeted investment in education and lifelong learning can create an appropriate way to deal with the challenges of the uncertainty and ambiguity of demographic change and strengthening the resilience of European labour markets (European Commission, 2023).

The VUCA concept thus summarises how volatility, uncertainty, complexity and ambiguity create challenges for people to handle today's dynamic environment. Therefore, new skills must be developed today with which people can successfully deal with these characteristics. In addition, appropriate, adaptive strategies for the future must be designed.

In view of these diverse challenges, the role of artificial intelligence (AI) becomes very important, as it has the potential to significantly expand our ability to process and analyse data, thus enabling us to develop more effective strategies.

Over the past few decades, artificial intelligence has brought a significant transformation in the areas of life, work and interaction. AI, especially generative AI, which has been available to the general population since the end of 2023 (e. g. ChatGPT, Perplexity AI: Microsoft Copilot, Google Gemini or DeepSeek), has become a crucial factor and influences a variety of aspects of our daily lives. Therefore, it is reasonable to assume that further changes are to be expected in the future in many aspects in the fields of work. In this context, individual further development through lifelong learning does not suffice, it's much more important to prepare for this development. That is why the current possibilities in the field of learning, the changed reality of life for the working population, and the legal basis regarding validation must be taken into account and formal education must be reconsidered. The development of AI systems is characterised by a high degree of dynamism and short innovation cycles, which makes it difficult to reliably predict future application scenarios and further increases the volatility of the working world.

In order to effectively counter and confidently master the complex and dynamic challenges of today, as outlined above, it is crucial to focus on skills that strengthen adaptability in a world characterised by volatility, uncertainty, complexity and ambiguity.

2 The 4 Cs

To meet these requirements, a future-oriented understanding of education is needed that goes beyond pure specialist knowledge. The so-called 4 C's (or 4 Cs) – critical thinking and problem solving, communication, cooperation, and creativity and innovation – are considered to be key competencies for learning in the 21st century. This concept originated in a US educational initiative by the National Education Association (NEA) and became particularly well known through the 'Partnership for 21st Century Learning (P21)'. The idea was to combine the multitude of '21st Century Skills' into a memorable and practical model. The above mentioned four skills were selected because they are important across all subjects and they are particularly suitable for complex problem solving, teamwork, creative processes and the reflective use of information. The term and the model of the 4 Cs subsequently also attracted attention in Europe, for example through a lecture by Andreas Schleicher (OECD) at re:publica 2013. The 4 Cs exemplify a forward-looking understanding of education that places the active participation of learners at its centre. They show how the education system can be reformed so that students can bring in their own perspectives and interests and develop their skills in a dynamic and complex world. The aim is to make education more inclusive, participatory and sustainable. At the Zurich University of Teacher Education, vocational schoolteachers are trained according to the

4 Cs (Sterel, Pfiffner & Caduff, 2018). The 4 Cs are presented below, starting with critical thinking and problem solving, which is fundamental for reflective actions and informed decisions.

3 Critical Thinking and Problem Solving

In today's educational reality, children, adolescents and young adults are increasingly expected to learn independently and reflectively, to engage with socially relevant topics and to present their work publicly (Städeli & Pfiffner, 2024). Choosing the topic plays a central role in motivation and identification. It is particularly effective when a topic is linked to a current event (e. g. climate summit), a social trend (e. g. self-presentation in social media) or an everyday situation (e. g. friendship) (Haller, 2017). Thereby, media literacy is a key prerequisite for working on self-selected topics: learners must be able to find, evaluate, classify and critically use information (Stiftung Medienpädagogik Bayern, 2022). This includes subject-specific, methodological, social and self-competence.

It is particularly important to be critical when using search engines, because it is often unclear how the results are generated: algorithms determine the order of the hits, influenced by factors such as backlinks, click numbers or personalised data. Search engines are therefore not neutral, but rather commercially oriented actors that filter information and use user data for advertising (Stiftung Medienpädagogik Bayern, 2022). Wikipedia is a frequently used research tool. The content is written by volunteer authors and is not editorially checked. Students should therefore learn to evaluate Wikipedia articles according to criteria such as style, neutrality, credibility, source references and structure (klicksafe.de, o. J.). AI-based language models such as ChatGPT are another increasingly used research tool. These can quickly summarise information, answer questions and support writing processes. Only around one-tenth of young people have never heard of ChatGPT, and the majority have already used the application themselves at least once. The use of ChatGPT increases significantly from the age of 14 and continues to grow with increasing age (JIM Studie, 2024). Using ChatGPT is challenging. On the one hand, this generative language model promotes creative processes, offers formulation aids and can help with collecting ideas. On the other hand, there is a risk that unverifiable or inaccurate information will be adopted. Chatbots sometimes invent sources or facts ('hallucinations') and they are not able to assess the quality or timeliness of the content they provide themselves. Learners must therefore always critically question where the information comes from, whether it is plausible and verifiable, and how it fits into their own learning context. Ethical questions – such as those relating to copyrights, transparency or distortion through training data – should also be addressed. Especially in the age of social media, analysing sources is essential. Cornell University recommends

four key criteria for checking sources: the identity of the authors, institutional background, objectivity of the presentation and topicality of the content (Stiftung Medienpädagogik Bayern, 2022). Social media also harbour the dangers of targeted false reports, for example in connection with armed conflicts such as the war in Ukraine or the Middle East conflict. Platforms such as mimikama.at or hoaxmap.org provide important support in educating people about disinformation. Visual media such as images, videos, graphics and statistics must also be critically scrutinised. Although photos are often considered objective, they are already subjectively influenced by selection, perspective, light or editing (Stein, Sehic & Appel, 2020). Programmes such as Photoshop or AI-based image generators (e. g. DALL-E) enable targeted manipulation. It is difficult to distinguish between real and artificially generated content. A sustainable education requires the targeted promotion of media, source and AI literacy. Only in this way learners can confidently deal with the flood of information, reflect critically and make responsible decisions. The conscious use of AI systems such as ChatGPT should become an integral part of school curricula – not only as a tool, but also as an opportunity to reflect on language, truth and responsibility.

Now that the ability to think critically as a basis for dealing with information and arguments has been addressed, we now turn to the second key competence: communication. After all, insights, thoughts and ideas only have an impact if they can be shared, discussed and further developed with others.

4 Communication

Successful classroom communication is central to successful teaching, because it trains a wide range of communicative skills in learners: listening comprehension, speaking, discourse and interaction skills, as well as expanding vocabulary. However, to ensure that the classroom discussion does not degenerate into a mere game of ping-pong between the teacher and a few students, in which the only thing left to do is to guess the 'right' answer, the teacher must be clear about the respective communicative function of the discussion (Leisen, 2025). Depending on the objective, the teacher pursues different intentions with the conversation. For example, does he want to gain insight into the students' prior knowledge, interpretations or misunderstandings? Is it about an exchange about a fact, a question or a text? Or should the students be given the opportunity to share and discuss their own ideas? Regardless of the aim of the classroom discussion, there are several strategies that are essential for successful communication. Firstly, listening. The teacher shows active interest, takes notes – either analogue or digital – and summarises key contributions or asks the students to do this. Secondly, opening up. The teacher does not respond immediately but allows several contributions and encourages other students to express themselves as well. Third: give

time. The teacher consciously allows pauses for speaking and gives the students time to think and formulate ideas; a short partner discussion in front of the class can be supportive, for example. Fourth: take up contributions. Earlier comments are recalled and linked to new ideas. Fifth: Give feedback. The teacher asks probing questions, encourages students to be more precise and highlights particularly successful contributions. Sixth: Structure and organise. The content of the discussion is organised – for example, by clustering notes on a flipchart – or arranged according to a predefined structure. Seventh: prioritisation. Towards the end of the discussion, the teacher asks the students to repeat their contributions or to relate them to the question. Eight: Refine content. Technical terms are explained, complex facts visualised, and the teacher concludes the discussion with a linguistically exemplary summary. Nine: Link teaching and learning phases. Transitions are made visible by clarifying what has already been understood and which questions are still to be answered. Ten: Secure results. New knowledge is linked to existing knowledge, contributions are summarised and the reference to the initial question is established (Leisen, 2025).

Following on from communication skills, the third key competence – cooperation – deepens the meaning of cooperative learning, because sustainable learning processes and a shared understanding of complex content can only be achieved through cooperation.

5 Cooperation

Cooperative learning differs significantly from conventional group work in the quality of the collaboration. It occurs when learners work together towards a clearly defined goal, making individual contributions and taking responsibility for both the learning process and the outcome (Trepod, 2022). This form of learning makes targeted use of synergies within the group to promote not only subject-specific skills but also transferable skills such as communication, cooperation and problem solving. In particular, cooperative learning offers great potential in heterogeneous learning groups, as it combines different strengths and relies on mutual support (Adl-Amini & Voellinger, 2021; Johnson & Johnson, 1989; Slavin, 1995).

There are five key elements of cooperative learning that indicate its quality. Firstly, positive interdependence: learners pursue a common goal that can only be achieved by the efforts of all group members. Clear objectives, role allocation and, if necessary, friendly competition foster a sense of responsibility within the group (Ewald, 2015; Slavin, 1977). Secondly, ownership: to ensure that all participants remain active, all persons are responsible for their own contributions. Small groups of three to five people are recommended, along with documentation of individual achievements, e. g. in the form of minutes (Lou et al., 1996; Lou, Abrami & d'Apollonia, 2001). Thirdly, supportive interaction: learners provide

each other with constructive feedback, exchange materials and thus strengthen not only their communication skills but also their ability to ask questions and to explain (Adl-Amini & Voellinger, 2021). Fourthly, cooperation skills: successful cooperation requires skills such as active listening, perspective taking, a functioning feedback culture and constructive conflict resolution. These skills are developed through the method itself (ibid., 2021). Fifthly, Reflection: The group reflects on both the process of working together and the result developed together. This can be done, for example, by learning diaries or by means of targeted reflection assignments (Phielix et al., 2010). If these elements are missing, it remains pure group work, which can lead to undesirable effects such as freeloading (Konrad & Traub, 2010; Veenman et al., 2000).

In the context of cooperative learning, teachers must change their traditional role and become moderating companions – they become a 'guide on the side' (Johnson & Johnson, 1989). While they may withdraw from the direct teaching process at times, they play a central role in the planning: they design the learning environment, select suitable tasks and put together well-thought-out group compositions. Studies show that lower-achieving students in particular benefit from mixed-ability groups, while higher-achieving students achieve learning gains in both homogeneous and mixed groups (Lou et al., 1996; Saleh, Lazonder & De Jong 2005). During the learning process, the teacher observes, provides supportive inputs if needed, and offers formative feedback. This targeted support – also known as scaffolding – includes mental aids, strategies or instructions to stimulate learning progress without dominating the group process (Kaendler et al., 2015; van de Pol et al., 2015; Sliwka, Klopsch & Dumont, 2019). Finally, the teacher's professional support is also crucial. Even in well-structured group work, incorrect results can creep in. Therefore, it is part of the teacher's professional role to review the results afterwards and correct them if necessary. A joint follow-up in the class ensures that all learners can build on a solid knowledge base (Ross, 2008; Fuchs, Fuchs & Burish, 2000). To realise its full potential, cooperative learning requires a well-thought-out didactic design, supportive guidance and a final reflection.

Finally, creativity and innovation are the fourth key competence, which particularly aims at developing new ideas and future-oriented solutions. Building on critical thinking, communication and cooperation, the focus is on the creative power that learners need in order to be able to actively shape a changing world.

6 Creativity and Innovation

Creativity arises from the interplay between motivation, emotion and cognition and it represents an active form of appropriating reality, in which inconsistencies are recognised and restructured (Vollmer, 2002). Especially the strong focus on functionality and summative performance measurement in school contexts

often has an inhibiting effect on creativity (ibid., 2002). Studies show that teachers sometimes even perceive creative contributions from students as disruptive (Beghetto, 2007), although creativity has long been considered a key qualification in education and at work.

Studies emphasise that intrinsic motivation, openness to new experiences (Hattie, 2023) and self-directed learning are essential foundations for creative thinking (Amabile, 1996; Robinson & Aronica, 2015). And teachers play an important role here: they should not only allow creative processes to happen, but they actively elicited them by selecting learning materials and locations that offer great potential for developing ideas (Urban, 2004).

A practical model for fostering creative skills in the classroom is provided by the Innovator's DNA model from Dyer et al. (2008, 2011), which originally comes from entrepreneurial innovation research and can be successfully applied to educational contexts (Jacob, 2017). It describes five central strategies, to each of which specific creativity techniques are attributed: Questioning, e. g. through question storming, in which learners develop many questions on a topic in a targeted manner; observing, e. g. through the conscious perception of everyday situations and their documentation; experimenting, e. g. through prototyping and trying out new solutions; networking, i. e. the targeted exchange with people from different fields and with different life experience; and linking, e. g. by combining different ideas using what-if techniques (Jacob, 2017; Freitag, 2020). The model can be integrated into teaching both holistically and in a modular way.

In the context of digital transformation, this creative process thinking is becoming increasingly important. Content and texts can be generated more and more automatically by AI tools such as ChatGPT, which means that traditional, purely literature-based project work is becoming less relevant. Therefore, in vocational education, there is an increasing demand for project work which is strongly oriented towards problem solving – with realistic issues that require creative thinking and action (Rauner, 2019). Topics such as climate protection, consumption, biodiversity or digitalisation are ideal for introducing students to current social challenges while also promoting their creative skills.

Furthermore, problem-solving thinking is an indispensable strategy for active environmental management. In a complex and contradictory world, young people need the ability to see challenges as something they can be shaped (Backerra, Malorny & Schwarz, 2020). However, creative solutions do not arise out of nothing, but they require a solid knowledge base and the ability to analyse information from different perspectives (Freitag, 2018, 2020). The knowledge-based problem-solving model developed by Freitag is divided into several steps that build on each other: First, two contrasting problem areas are analysed (e. g. 'pesticides in drinking water' vs. 'pesticides in agriculture'), then possible solutions are developed, conditions for viable solutions are considered, and creative, future-oriented strategies are formulated.

This systematic approach not only strengthens the students‘ independent thinking, but it also strengthens their ability to change perspectives and develop innovative skills – skills that are becoming increasingly important in education, at work and in society.

7 4 K and “Entrepreneurial Thinking and Action”

In the future world of work, tasks that simply have to be “completed” will become increasingly obsolete. Instead, personal initiative, creativity, the ability to identify opportunities, critical thinking and problem-solving skills will become massively more important. Entrepreneurial skills are needed to meet these requirements. In many curricula, little importance is still attached to teaching future skills, entrepreneurial skills and strengthening self-efficacy. Although in many cases the aim is to focus on skills, the skills that allow learners to actively shape their future, adapt to new corporate cultures and also act in the midst of uncertainty are only marginally considered (Müller et al., 2021).

At the European level, the relevance of entrepreneurial thinking and action has been considered for a long time. The EU addressed this in 2016 with the introduction of a ‘European Framework for Entrepreneurship Education’ (Council of the European Union, 2018). Likewise, the EU‘s ‘Reference Framework for Lifelong Learning’ lists entrepreneurial competence as one of eight key competences, on a par with others such as ‘literacy’ and ‘digital competence’. However, it should be noted that entrepreneurial competence is not limited solely to the founding of companies (ibid., 2021). The extract from the European Council recommendations shows this clearly:

> “Entrepreneurship competence refers to the capacity to act upon opportunities and ideas, and to transform them into values for others. It is founded upon creativity, critical thinking and problem solving, taking initiative and perseverance and the ability to work collaboratively in order to plan and manage projects that are of cultural, social or financial value” (Council of the European Union, 2018, p. 11).

Consequently, there is an expectation of possessing the ability and the will to participate in all areas of life – personally, socially, professionally and culturally. This process can take place at various levels: How should I proceed if I take over my mother‘s company? What can I do if I want to start a community garden in the neighbourhood? How can I develop an idea into a small business? What could I do as an employee to make the painting company I work for more environmentally sustainable? These are just a few of countless opportunities for action. However diverse they may appear; they all require entrepreneurial skills (Müller et al., 2021):

- To realise entrepreneurial projects, a keen awareness of the existence of different contexts and opportunities that can be used to realise individual ideas is required. Identifying such opportunities needs an understanding of the complex relationships in society and the economy, as well as the associated opportunities and challenges. In addition, successfully implementing ideas requires in-depth knowledge of how initiatives or projects can be carried out while taking sustainability aspects and ethical principles into account.
- Strategic thinking, constructive reflection and developing solutions are further aspects of entrepreneurial skills. An essential aspect is also the ability to work both independently, and in a team, to provide the necessary resources for an idea or a project, and to make decisions under uncertain conditions and conflicting information.
- Entrepreneurial attitudes manifest themselves in various aspects, including initiative, a belief in one's own self-efficacy, proactive and future-oriented action, and courage and persistence in pursuing goals. In addition, the will to inspire others and recognise their ideas, as well as the determination to take responsibility for ethical action, can be identified as significant elements (Council of the European Union, 2018).

The development and training of entrepreneurial skills can be promoted through specific educational opportunities. The teaching and learning programme myidea.ch, an initiative of the project 'Entrepreneurial Thinking and Acting at Vocational Schools in Switzerland', is one those opportunities. In this programme, students work in small teams to develop their own business ideas. Examples include a filter to prevent microplastics from entering the sewage system, a company that makes new products out of old leather, or a craft business that specialises in repairing old buildings.

The programme is characterised by four principles:

- Working on your own business idea
- Constantly linking knowledge acquisition and application:
- the examination of case studies dealing with both failed and successful startups
- the exchange with founders

What is essential is the realisation that entrepreneurial skills cannot be taught exclusively through theoretical instruction or mere practice. Instead, students should acquire the ability to work on open-ended tasks and projects, given sufficient time and space. This approach allows students to conduct experiments and collect ideas, as well as experience dead ends and find ways out of them. In addition, they can face uncertainties and gain confidence again (Müller et al., 2021).

8 Critical thinking as a supplement to the teaching and learning programme UDH

In order to significantly strengthen critical thinking in the context of myidea, the project 'UDH – Promoting Critical Thinking and Recognizing Fake News' was launched in cooperation and with the support of SRG SSR. New teaching and learning materials were developed to help students maintain a 'healthy' critical distance from their own business idea. Among other things, this means that they analyse the problem they want to solve with their business idea more precisely, check the assumptions they make for their business model appropriately or plan their marketing measures in such a way that they do not disseminate misleading information (Gutzwiller et al., 2023).

Entrepreneurial thinking empowers learners to recognise opportunities, take responsibility and act creatively in complex situations. Designing digital learning processes is an important part of these future skills. Digital technologies not only offer new ways of implementing one's own ideas, but they also change learning environments and pedagogical action. Consequently, it is crucial that teachers themselves have digital skills and use them in a targeted way to promote the 4 Cs. The following section shows how digital learning environments can be designed and the central role of the European competence framework DigCompEdu for professionalisation in this area.

9 4 C and Digitalisation

Digital learning environments have evolved from static CD-ROM learning programmes to flexible, web-based platforms that teachers can design and customise independently. In particular, learning management systems (LMS) such as Moodle, OLAT or ILIAS offer a wide range of functions for creating digital learning spaces (Kerres, 2018). These include providing materials, distributing and evaluating tasks, and moderating discussions. At vocational schools in Switzerland, Moodle is particularly popular, which is why its possibilities are explained below as an example.

A central didactic goal is the provision of content. The content can be organized either chronologically or thematically. The 'Lesson' function enables multimedia-based, interactive self-study, while the 'Text page' is used for concise content or links to other resources. Functions such as 'Directory' and 'File' serve to provide materials in a structured form. Moodle offers the 'Test' activity with different question types such as multiple choice, free text or calculation tasks with variable numbers to determine the learning progress. The 'Task' function is suitable for longer text formats such as essays, as it allows files to be uploaded and

enables individual assessments and feedback. The design of feedback processes can be specifically tailored by Moodle. In addition to individual feedback from the teacher (also in audio or video form), the 'Mutual Assessment' function allows peer feedback among learners. This function involves several phases: preparation, submission, assessment and evaluation. The teacher has the option of controlling the process, defining assessment criteria and making feedback anonymous. To promote collaboration, Moodle offers basic communication functions such as forums. External tools such as BigBlueButton (video conferencing), Microsoft Teams, Google Workspace or Slack can be used in addition. Data protection is crucial here. Combining different tools makes it possible to design a varied and learner-centred classroom. However, it should be noted that not all schools have an LMS. Low-threshold alternatives such as Schabi (www.schabi.ch) offer simple dashboards with links and resources. In addition, tools such as Padlet or simple PDFs with hyperlinks offer further options.

When designing digital learning environments, the degree of openness, structure and communication culture must be taken into account. Learning platforms such as Moodle are characterised by greater control of the learning process than open environments. The choice of structure should be based on the learning objective and the prior knowledge of the learners (Kerres, 2018). A combination of both is often useful. It is essential to avoid technical or didactic hurdles, such as the obligatory completion of a chapter before the next one, in order not to unnecessarily block the learning process.

A space for exchange is essential. In digital learning environments, learners often work individually, so an accompanying communication channel such as a Moodle forum or a Teams channel is crucial. Using such exchange opportunities not only promotes understanding but also stimulates new thought processes. Reflecting on content, comparing solutions and developing new ideas are encouraged by asking questions. However, the use of such channels must be accompanied, as many learners feel inhibited about asking questions in public – especially in formal forums. Low-threshold tools such as messenger services can have disinhibiting effect in this context, since messages are generally perceived as more fleeting. It is the responsibility of the teachers to guide the communication processes in a targeted manner. A suitable method for doing this is to start with a compulsory exercise in which all learners ask and answer questions. This promotes the long-term use of such tools.

The European Commission's DigCompEdu (Digital Competence Framework for Educators) provides a central reference framework for teachers who want to design, promote and reflect on digital learning. It describes how teachers can integrate digital technologies into educational processes in a targeted and effective way – from planning to evaluation – in six areas of competence and 22 subcategories (see Figure 7.1).

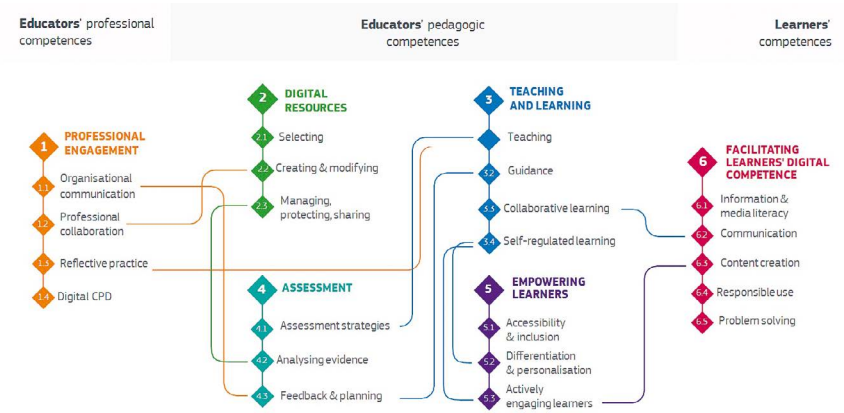


Figure 7.1: DigCompEdu framework: DigCompEdu describes 22 competences organised in six Areas. https://joint-research-centre.ec.europa.eu/digcompedu/digcompedu-framework_en [2025-04-05].

For teachers who want to promote digital learning, DigCompEdu is of central relevance for several reasons. DigCompEdu offers a clear, structured framework that helps teachers to systematically classify and develop their digital skills. At a time when technological possibilities are constantly growing, the competence framework helps to differentiate between the mere use of technology and its pedagogically meaningful application. The focus of DigCompEdu is therefore not on the technology itself, but on its pedagogically sound application. It is recommended that teachers use digital tools to promote creativity and innovation, critical thinking and problem solving, cooperation and individual learning processes. This is closely aligned with the 4 C model and modern educational ideals. DigCompEdu makes it possible to determine the level of a teacher's skills and categorise them from 'newcomer' to 'pioneer'. This allows targeted professional development measures to be developed that are aligned with the individual's level of development. The teacher is not overwhelmed, but rather systematically supported. In addition to the design of the lessons, the framework also emphasises learning analysis, digital assessment methods and feedback. Especially in hybrid or fully digital learning settings, teachers need new ways to make learning progress visible and to react to it in a targeted manner. Digital tools enable individualised learning. DigCompEdu encourages teachers to design inclusive and adaptive learning opportunities that address the needs of different learners – a central goal of modern education. In addition, ethical and legal issues – such as data protection, copyright or algorithmic bias – are also taken into account. Teachers are encouraged to develop an awareness of the ethics of technology and to pass this on to their students. DigCompEdu is not only an individual tool, but it can also be used at

the team level or for entire schools. In this respect, DigCompEdu contributes to digital school development in a systematic and sustainable way.

10 4K and AI

At the end of 2022, the US software developer OpenAI released the test version of ChatGPT. Since then, the language-based application has been used by countless people worldwide – despite legal grey areas – including students and teachers (News4Teachers, 2023a, 2023b). In early 2025, DeepSeek's Chinese AI assistant was launched. Within days, it reached the top of the download charts in Apple's App Store in the U.S., surpassing both ChatGPT and Google's AI Gemini (von Lindern, 2025). Hardly any other technological innovation has reached educational institutions so quickly, comprehensively and profoundly. This immediately raises questions, for example about a possible ban in the classroom, about performance evaluation or about meaningful use in the acquisition of knowledge (News4Teachers, 2023a).

At the classroom level, it is striking that teaching that aims to develop skills for action emphasises not only the evaluation of learning outcomes, but also the path to achieving them. The integration of AI into the learning process therefore leads to a significant increase in the value of the assessment of the learning process. Artificial intelligence can support the learning and working process as a versatile tool by, for example, providing new thought-provoking impulses and assisting with information searches or the organisation of content. Overall, the use of AI thus leads to a greater appreciation of the learning process.

The direct inclusion of AI in the assignment plays an important role in differentiating between students' own and third-party work. Due to the easy accessibility and user-friendliness of tools like ChatGPT, it is not always easy for teachers to detect cheating. It is therefore crucial that students actively engage with the learning content and deepen their insights by integrating the available AI tools into the design of the tasks. This is done, for example, when students submit both their original text and the version optimised by generative AI and explain the edits they have made. In general, tasks should be formulated in such a way that they cannot be completely solved by an AI (Hassler/Sterel/Pfiffner 2024). Effective tasks include cooperative, creative, critical-reflective and communicative learning processes, as recommended by the Hessian Ministry of Education in 2023 (Hessisches Kultusministerium, 2023). AI can also be used to identify the individual learning needs of students and to provide them with customised resources and practice materials. This personalisation of learning is based on the students' personal information collected by AI tools. However, such an "intelligent tutoring" approach raises important data protection issues: How is the collected data handled? Who has access to it? And for what other purposes could

this information be evaluated? The answers to these questions will have to be clarified by the education departments and those responsible in the future.

It could be assumed that with the increasing implementation of AI in the education sector, certain skills acquired at school could become less relevant. This is due to the fact that learners can potentially achieve peak performance with the support of AI. There is consensus that AI is playing an increasingly important role in education and that a redefinition of the distribution of roles is needed, both between teachers and AI and between learners and AI. Of particular relevance in this context is the question of the extent to which AI may be used to complete projects or in-depth work.

The so-called prompting skills are a crucial factor for the successful use of AI in the learning process. The effectiveness of the AI can be increased if the query is as precise as possible. Furthermore, critical thinking is essential fpr checking the plausibility of the AI response, because AI systems are not error-free per se. It is obvious that the continuous improvement of AI capabilities is accompanied by the need for critical reflection (Hassler, Sterel & Pfiffner, 2024).

To ensure effective teaching of critical thinking in the context of AI, it is crucial that teachers first gain clarity about the appropriate didactic approaches and define the criteria for evaluating critical thinking. For example, teachers can use the five strategies for promoting critical thinking according to Jahn (2012) as a guide: 1) create conditions for critical thinking; 2) design the initial phase; 3) support the phase of judgement; 4) support the development of alternatives; 5) create opportunities for testing (for more details, see Pfiffner, Sterel & Caduff, 2022).

Furthermore, it is of great importance to integrate this into general school development. In this framework, a shared definition of the meaning of critical thinking in the relevant disciplines can be established considering the conditions of artificial intelligence. On this basis, it is possible to create the necessary framework conditions, to select suitable methods, and to formulate educational goals (Pfiffner, Sterel & Caduff, 2022).

11 Conclusion

In an increasingly dynamic and interconnected world, the question of what skills young people need to remain socially capable and to actively shape their future becomes more urgent. The four competencies of critical thinking and problem solving, communication, cooperation, and creativity and innovation – in short, the 4 Cs – exemplify an understanding of education that is no longer primarily oriented towards the reproduction of knowledge, it rather focusses the development of creative ability, reflective power and social responsibility. The 4 Cs illustrate that learning does not take place exclusively in the examination of content, but particularly in the active processing of realistic, meaningful and open-ended

problems. It is emphasised that forms of learning in which students ask questions themselves, recognise connections, take different perspectives and develop solutions together should be encouraged. The 4 Cs point to an understanding of learning that sees learning as a social, dialogical and creative process – embedded in a culture of participation and shared responsibility.

In view of current and predicted social, technological and ecological challenges, these competencies are becoming increasingly relevant. Consequently, future education systems must enable young people to deal with uncertainty, complexity and change. The ability to navigate confidently in digital spaces, to critically reflect on media, to create with digital tools and to make ethical judgements when dealing with new technologies are of crucial importance. The ability to reflect critically, to search for creative solutions and to implement them in a cooperative way is indispensable. This is not important for individual educational biographies, it is also vital for the common good: democratic societies need people who can communicate, even across differences, who take responsibility, justify decisions and work together for the common good. The 4 C form the foundation for this.

For teachers, this means rethinking the way they teach, not as a mere sequence of content, but as a space in which young people can gain experiences, discover scope for action and experience their own effectiveness. Designing learning environments that spark curiosity, invite critical thinking, encourage collaboration and provide space for creativity and error is an essential aspect of this development.

Consequently, the 4 Cs do not represent a rigid framework, but rather serve as a pedagogical orientation – flexible, connective and forward-looking. The 4 Cs thus represent an education that prepares students not only to pass, but to create.

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Chapter 8 | Art Education in the Context of Service-Learning at the Urban Diversity Education Campus and the University College of Teacher Education Vienna

Anastasiya Savran, Rolf Laven & Wolfgang Weinlich

Service-Learning is a learning- and teaching-concept which focuses on the empowerment of its learners, leading to participation in terms of civic engagement (Weinlich & Laven, 2020); (Asrar et al., 2022). The long-term goal of Service-Learning is to strengthen social responsibility, embrace diversity, and promote participation and empowerment through community service. Examples of Service-Learning cover a wide range of activities and deeds, including the creation and co-designing of (public) spaces, the collaboration of different institutions within the neighbourhood. The intrinsic motivation of the participants and learners is boosted through engagement and thus used to overcome challenges and barriers. Through individual strengths and cooperation with others, value and awareness are created (Laven et al., 2022). Service-Learning as a pedagogical method is multifaceted and diverse: in both analogue and digital spaces, learners are encouraged to make a contribution to society as a whole and/or to specific groups (Laven, 2022). Numerous personal and social skills are fostered within the expanding of cross-institutional and cross-disciplinary-networking. Thus, existing concepts, resources, spaces or innovative developments are improved (Weinlich & Laven, 2020). In Austrias Curricula, Service-Learning is currently only anchored in curricula to a limited extent, often in connection with social-learning and social entrepreneurship. The OECD Learning Compass combines Service-Learning-approaches within concepts of civic engagement and student co-responsibility (see Aschenbach, 2023 p. 14), whereas the Austrian primary school curriculum mentions terms such as Intercultural Learning and Value-Education. However, no precise definition or anchoring are depicted. Didactical research in Teacher Education faces a steady increase in the complexity of learning and teaching content, demanding sufficient expertise, skills and continuous self-development and professionalization. Those requirements highlight both the relevance and potential of Service-Learning within the active and inclusive participation of people. The following paragraph focuses on the unique Service-Learning concept in Teacher Education at the University and College of Teacher Education in Vienna. In conclusion, current research and practical examples are depicted.

1 Service-Learning, Art Education, and Urban Diversity Education

The University College of Teacher Education Vienna has been successfully implementing Art Education and Service-Learning in the context of URBAN DIVERSITY EDUCATION in various projects and research since 2022. In particular, the Urban Diversity Education emphasis at the University and College of Teacher Education emphasizes the broad field of diversity in relation to every individual, the environment and society as it whole, aiming to use the potential of diversity for effective navigation, participation, co-cooperation and creation of an inclusive environment. The plurality of different cultural backgrounds, languages, religions etc. are appreciated, included and grant space, time, resources and visibility for its needs at the university campus. The creation of such environments is ensured by a sustainable Art Education. The following grid (see Table 8.1) highlights the Service-Learning-Concept within UDE and Arts Education, followed by a detailed insights in research and practise:

Table 8.1: Arts Education, Urban Diversity Education and Service-Learning: The Service-Learning-concept at the University and College of Teacher Education in Vienna

Urban Diversity Education	Service-Learning	Arts Education	
Targeted integration: Diversity dimensions on a personal, institutional & societal level	Applying knowledge, knowledge transfer, expansion of pedagogical methods, teaching innovation, hands-on	Self-expression, different materials, creative techniques	Innovative learning- approach Motivational Student participation
Differences such as gender, social class and ethnicity: valuable resources	Engagement of the students, joint design	Empathy promotion, cooperation, heterogeneity advocacy, inclusive (visual) language	Diversity-appreciative & inclusive environment Collective participation
Interdisciplinary orientation, diversity as a resource	Social responsibility, group projects, participation	Social inequality, discrimination, migration, transculturality etc. through symbols, quotes	Creative self-expression Contextualised knowledge and skills, planning & implementing projects
Visualizing the needs of (minority) groups	Depicting & addressing social inequality, discrimination, migration, transculturality, criticism of racism and antisemitism	Symbolic representation, claiming rights, participation	Fostering of personal and social skills Methodological and didactical variety

Urban Diversity Education	Service-Learning	Arts Education	
Self-reference, value-creation	Critical thinking, empathy, reflection, addressing ambiguity	Anthropological-artistic examination of one's own biography, influence and personal impact, vision and realisation through creative activity	Hands-on learning-methods Social awareness & commitment Third mission
Involvement of people, groups & environment through participation	Room design and interior design	Interdisciplinary exchange, cooperation, projects & ideas are realised/embodied	Participation and co-design

Art projects which deal with the own biography, migration, identity and diversity offer space for reflection and discussion enabling learners to scrutinise and understand their own and others' experiences and perspectives (Laven, 2013). Through theatre, film, literature and visual arts, power structures and social norms can be made visible and questioned (Blatt-Gross, 2023). This promotes critical awareness and a deeper examination of issues such as racism and social inequality (Asrar et al., 2022). Cultural projects depicting personal stories of migration and discrimination offer marginalised voices a platform and help to break down stereotypes and prejudices. Art and culture create spaces for encounters, exchange and intercultural dialogue. They promote understanding of different living environments and perspectives and contribute to strengthening social cohesion. Through symbolic representation in art and design, critical and controversial content can also become a topic and subject of discussion, which in turn generates innovative approaches and solution strategies. This is particularly valuable in an increasingly complex and globalised world. The following paragraphs depict Best-Practice Examples.

2 Best-Practice Example 1: Research – SLUSIK

In the winter semester 2023/2024 and summer semester 2024, Teacher Training students developed their visions for spatial design as part of the spatial research course following theoretical input on Service-Learning and the SLUSIK (Service-Learning Upscaling Social Inclusion for Kids) and SLIDE (Service-Learning, Inclusion, Diversity, and Digital Empowerment) research projects. The outcomes, activities and projects of those projects are listed in the following paragraphs:

- *Community Art Projects:* Students collaborated with local artists and community members to create public art works reflecting themes of diversity, inclusion, and social responsibility. These artworks were co-designed in participatory workshops where Teacher Training Students and residents shared their personal stories, ensuring that the artwork authentically represented the lived experiences of the community. This initiative strengthened neighborhood/school community identity and encouraged intergenerational dialogue.
- *Sensory Learning Materials:* Students designed and created sensory learning materials, such as tactile books, interactive installations, and adaptable classroom tools for children with special needs. These resources were developed through co-creation workshops, ensuring that they met the specific needs of learners with visual, auditory, or cognitive impairments. The hands-on approach of the project enhanced empathy and understanding among students regarding inclusive education.
- *Intergenerational Learning:* Through storytelling workshops with elderly community members, students engaged in projects that bridged generational gaps and promoted cultural heritage preservation. By documenting oral histories, students helped preserve local traditions and created digital storytelling content which was later showcased in schools and community centers. This initiative not only provided valuable learning opportunities but also helped combat social isolation among the elderly by fostering meaningful intergenerational connections.
- *'Kinderschuhe für Osteuropa' – Learning Materials and NGO Cooperation:* As part of a collaboration with the NGO *Kinderschuhe für Osteuropa*, students developed educational materials and organized donation drives to support children in Eastern Europe. The initiative involved creating learning packages with school supplies, interactive workbooks, and age-appropriate educational games. Additionally, students engaged in fundraising activities and awareness campaigns to highlight the challenges faced by disadvantaged children in the region. By actively participating in these efforts, students not only applied their academic knowledge but also gained firsthand experience in humanitarian work and global citizenship.

3 Art Education and Service-Learning

A crucial outcome of the SLIDE-project is the interactive game SHIFTING PERSPECTIVES by Wolfgang Weinlich, which was developed as part of the SLIDE in 2022. The game is used as a tool to generate and brainstorm ideas using different techniques and unconventional questions. While playing, participants

are encouraged to work with different art supplies, materials which depict the designed and created outcome. Shifting Perspectives consists of nine rounds as the following Figure 8.1 illustrates.

Figure 8.1: Example of one playing round of SHIFTING PERSPECTIVES.

As part of the course SPACE STUDIES, a group of students expressed the desire to plant greenery in both interior and exterior spaces of the University of Teacher Education. Their goal was to create gardens and incorporate more natural colors and color schemes into the environment. During the planning process, the group also explored fire safety regulations, which led to a more refined vision for their project. This engagement facilitated direct contact and cooperation with the university administration, demonstrating the collaboration impact of Service-Learning and participatory design. In order to illustrate the brainstorming phase, two practical examples of students are depicted (see Figures 8.2 to 8.5).

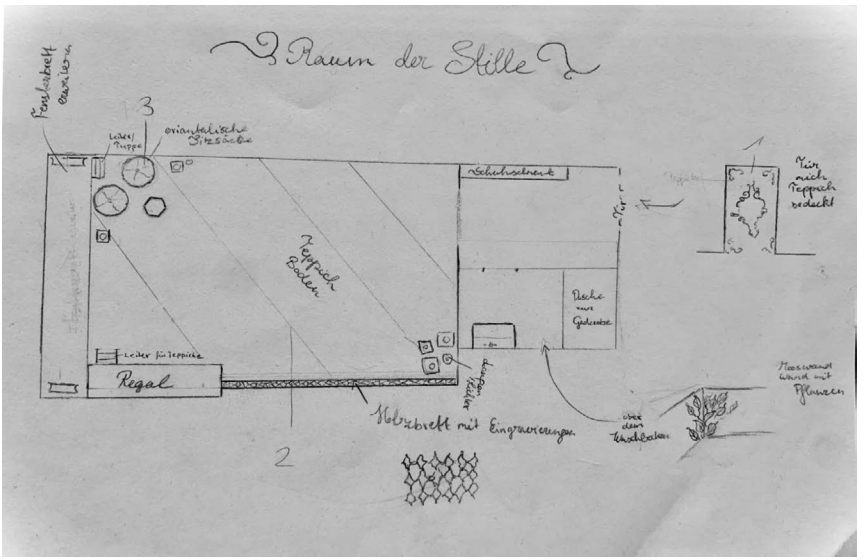

Figure 8.2: Sketch and notes for the project: room of quietness.

The first illustration portrays visions of co-designing and the use of indoor and outdoor spaces of the university campus. Especially plants and artworks within furnished rooms were depicted. The second illustration consists of a sketch and notes for a "room of quitness" aiming for granbting space for spiritual, religious or meditiative needs. As a result, students experimented with crayons creating art works in outdoor-spaces, installing sculptures and upcycling plastic to inspiring quote-shilds. Thus, a formal storage cabinet was granted within the designing of a room of quitness. Furniture, the wall painting and further equipment were organizied and installed.

Figure 8.3: Furnished and designed room of quietness.

Figure 8.4: Student's outdoor and interior design of the campus.

Figure 8.5: Students installing sculptures at the campus.

4 Best-Practice Example 2: Research and Implementation – Social Hackathon

The Social Hackathon (see Figure 8.6), an initiative of the SLIDE project, was a key event that brought together students, educators, and community stakeholders to address pressing social issues through creative and technological solutions. The hackathon focused on fostering digital empowerment, inclusion, and diversity by engaging participants in co-creative processes to develop practical solutions for societal challenges. During the event, interdisciplinary teams from different countries collaborated intensively to design digital tools and services that support social inclusion. One standout-project involved developing an interactive online platform which connects volunteers with community organizations in need of support. This initiative not only strengthened civic engagement but also provided students with hands-on experience in project management, digital tool development, and social impact assessment. Another project emerging from the Social Hackathon was an augmented reality (AR)-based storytelling-tool which enabled students from diverse backgrounds to share their personal migration and inclusion experiences. This tool provided an innovative way to promote empathy, understanding, and cross-cultural dialogue through digital storytelling. The combination of artistic expression and digital technology demonstrated the potential of Service-Learning to bridge educational, social, and technological gaps. Finally, a social-media-campaign was founded digitally, addressing elderly people for an inclusive approach and the gender-gap in digital spaces. At the end of a whole-day-event of the Social Hackathon, all participants presented their outcome.

By integrating research and practical implementation, these best-practice examples illustrate the transformative potential of Service-Learning within higher education. The SLUSIK and SLIDE projects not only empower students but also contribute to more inclusive and socially responsible learning environments. Through hands-on engagement and interdisciplinary collaboration, these

initiatives highlight how Service-Learning can drive meaningful change in education and society.

Figure 8.6: Students at the final presentation during the Social Hackathon.

5 Conclusion

The integration of Service-Learning into educational frameworks, as demonstrated by best-of examples of the SLUSIK and SLIDE projects, highlights its vast potential for fostering social inclusion, digital empowerment, and civic engagement. These SL-projects demonstrated how Service-Learning can be a powerful pedagogical tool that extends beyond traditional academic settings. By actively engaging students in real-world challenges, these initiatives have successfully combined theoretical knowledge with practical application, fostering a sense of responsibility and social commitment.

One of the key takeaways from these projects is the importance of interdisciplinary collaboration. The success of initiatives such as the Social Hackathon and the urban greening project at the University of Teacher Education showcases the potential of bringing together students, educators, professionals, and community stakeholders to co-create solutions for social issues. This participatory approach should be further encouraged and institutionalized in higher education to ensure a lasting impact. Moving forward, the scalability and sustainability of Service-Learning projects should be a primary focus. To achieve this, educational institutions must integrate Service-Learning into curricula more systematically, ensuring that students across disciplines have access to these experiential learning opportunities. Furthermore, leveraging digital tools and emerging technologies—such as

augmented reality, virtual collaboration platforms, and AI-driven educational applications – can enhance accessibility and engagement in Service-Learning initiatives. Additionally, strengthening long-term partnerships with NGOs, governmental organizations, and private sector stakeholders provide more structured support for Service-Learning projects. Programs such as *Kinderschuhe für Osteuropa* have shown how collaboration with NGOs create meaningful educational experiences while addressing urgent societal needs. Expanding such initiatives on an international scale could further enrich students‘ global perspectives and civic engagement.

Ultimately, Service-Learning is not just about acquiring knowledge – it is about fostering empathy, active citizenship, and the ability to create tangible change. This was depicted by the SL-concept at the University and College for Teacher Education, which combines Art Education and Urban diversity education. To summarise, it can be said that the combination of Service-Learning (SL) and Urban Diversity Education (UDE) offers promising future potential for education and social participation. Through the targeted integration of diversity dimensions and creative learning spaces, comprehensive education and development processes can be initiated. The integration of art and design in urban diversity education offers considerable potential for promoting reflection, empathy and educational equity (Steed-Vamos et al., 2023). The interdisciplinary orientation and use of creative methods can further develop pedagogical approaches and address social inequalities (Weinlich & Laven, 2020). Art and culture play a central role here, as they serve as a means of reflecting on and transforming social norms and power relations. UDE and Service-Learning can help to recognise and use differences such as gender, social class and ethnicity as valuable resources. This promotes an inclusive learning environment in which students bring in different perspectives and learn from each other. In the long term, this opens up new opportunities for an inclusive and equitable education system based on the principles of diversity, creativity and social responsibility (Herzog-Punzenberger, 2017).

Future initiatives should focus on scaling successful models, fostering long-term partnerships with local and international stakeholders, and integrating Service-Learning more systematically into curricula. By continuing to evolve and refine Service-Learning methodologies, educational institutions can play a crucial role in shaping socially responsible and engaged future leaders who are equipped to navigate and address the complexities of an interconnected world.

6 Outlook

Civic engagement, the expansion of the repertoire of action and the realisation of project ideas are just some of the key benefits significant contribution to teaching and research in university didactics. By actively participating in social projects,

students develop important social skills such as teamwork, communication and empathy (Asrar et al., 2022). These skills are essential in the modern world of work. The range of projects – from manual work to social engagement – demonstrates the flexibility and wide range of applications of Service-Learning. It enables students to contribute and expand their individual strengths and interests. The sense of community and awareness of social responsibility are promoted (Asrar et al., 2022). Further research in terms of self-expression and artistic learning-techniques should emphasize the universal character of (visual) language, supporting both teacher and students in the communication, expression and cooperation in effective, sustainable and productive learning environments.

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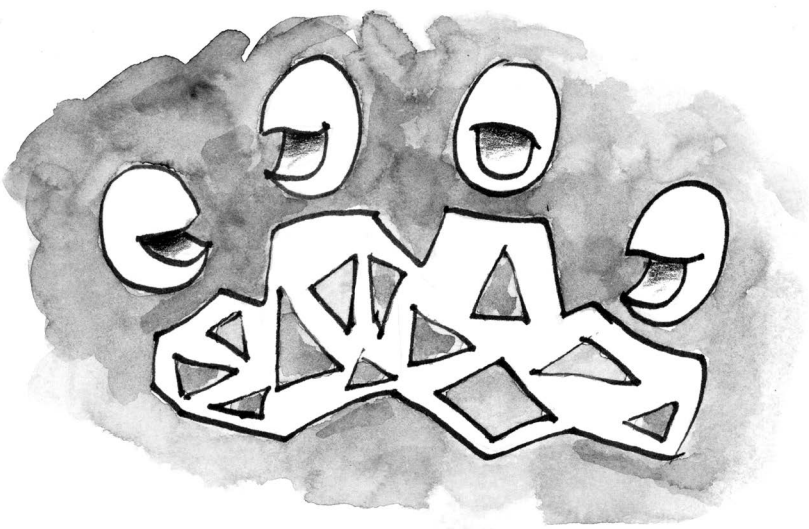
Part IV | Students as Designers of Their Own Education – Success Stories



Drawing by Stefanie Egger

Chapter 9 | The Convergence of Empowerment, Competence, and Outcomes: Insights from the *StAct – Start and Act* Project[1]

Sabine Zauchner & Reinhard Bauer

Abstract

Societal transformation and the increasing complexity of global challenges demand a fundamental rethinking of vocational education. Traditional models centred on content transmission are no longer sufficient. Instead, competence-oriented, outcome-driven approaches rooted in Enabling Didactics are required to establish new and future-proof forms of learning. Building on this framework, the StAct project involved 207 students from primary and secondary levels I and II who did not merely participate but acted as active researchers throughout the process. They engaged in two cycles of dialogue, research, and presentation.

The outcomes included a wide variety of sustainability-related and socially oriented projects, such as AI-driven navigation systems for cargo ships, theatre performances on environmental protection, and local exchange markets. In working collaboratively on these projects, students significantly developed their entrepreneurial competences. The project illustrates how competence- and output-oriented learning environments empower young people as researchers of their own educational journeys, equipping them with entrepreneurial competences such as autonomy, innovation capacity, and social responsibility to address real-world challenges.

1 Introduction

Developments in the labor market and society demand the early recognition of and response to megatrends such as globalization, digitalization, urbanization, demographic change, diversity, and sustainability (Haberfellner & Sturm, 2016). Professions are undergoing profound change in the age of digital transformation

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(Wittmann & Weyland, 2020), making it imperative for vocational education and training to evolve accordingly (Driesel-Lange et al., 2020).

The very concept of work must be fundamentally re-envisioned (Clarke, 2019), particularly in the context of sustainable development. Rebmann and Schlömer (2020, p. 334) describe sustainable development as the "great transformation of the 21st century", noting that "a profound realignment of society, economy, and entrepreneurship in terms of resource use is necessary". The challenge, therefore, is to sensitize, motivate, and empower young people in education and employment to become competent co-creators of a sustainable future. What is clear is that children and adolescents can no longer be excluded from these debates – for it is ultimately their present and their future that are at stake.

1.1 Background

Promoting entrepreneurial thinking and action among students of all ages and school types (BMDW, 2020) is a key educational policy goal of the EU and its member states. Frameworks such as EntreComp (Bacigalupo et al., 2016), its user guide (McCallum et al., 2018), and Austria's *TRIO* model (Aff & Lindner, 2005) provide foundations for developing learning models in entrepreneurship education. *EntreComp* defines three competence areas – *Ideas & Opportunities, Resources, and Into Action* – each with five skills, such as creativity, self-efficacy, collaboration, and initiative. Entrepreneurship is understood as a set of transversal competences that can be applied in all areas of life: turning ideas and opportunities into value, whether economic, social, or cultural (FFE-YE, 2012).

While fostering entrepreneurial spirit is considered crucial to meeting economic, social, and cultural challenges, practice often remains tied to curricula rather than individualized, competence-oriented learning. Schools and teachers frequently lack clear understanding of students' individual potential or how entrepreneurial competences manifest in real contexts.

If we assume that *"[…] students can and should train their ability and willingness to create value for other people. This is at the core of entrepreneurship and is also a competence that all citizens increasingly need to have in today's society, regardless of career choice"* (Lackéus, 2015, p. 6), then we must pay particular attention to ensuring that entrepreneurship education must ensure equal participation for all learners, independent of background or gender.

1.2 Specific Aim

The project *StAct – Start and Act* aims to introduce children and young people to forms of entrepreneurial thinking and action at an early stage. The focus is not

on the mere transmission of knowledge, but rather on enabling active and self-directed learning processes. The theoretical foundation is provided by the model of *Enabling Didactics* (German: *"Ermöglichungsdidaktik"*) developed by Rolf Arnold and colleagues which is rooted in the tradition of the systemic-constructivist paradigm. In this understanding, learning is not generated through instruction but made possible through the design of supportive framework conditions (e. g. Arnold, 2012abcd; Arnold & Schön, 2017; Simon, 2017; Kaiser, 2003).

2 The Interplay between Didactics, Outcome, and Competences

Modern didactics in vocational and adult education are shaped by Rolf Arnold's Enabling Didactics, outcome-orientation, and the European *EntreComp* framework for entrepreneurship education. Together, they form a model that positions learners as active agents and emphasizes self-directed learning and the development of transversal competences. Enabling Didactics views learning as a constructivist, self-organized process in which teachers act as facilitators (e. g. Arnold, 2012; Arnold & Schüßler, 2001). Outcome-orientation defines success by the competencies learners can apply in authentic contexts (Weinert, 2001), while *EntreComp* provides a structured set of entrepreneurial competencies such as creativity, initiative, and collaboration (Bacigalupo et al., 2016). This integrated approach supports learners' autonomy, adaptability, and ability to create value across economic, social, and cultural domains.

2.1 Enabling Didactics

The concept of *Enabling Didactics* represents a decisive departure from traditional teacher-centred models of instruction and has become a central framework in adult and vocational education didactics. Its starting point is the assumption that learning is a self-organized process that cannot simply be "made" or instructed but can only emerge under certain conditions. Enabling Didactics therefore builds strongly on constructivist learning theories (e. g. Siebert, 2008; Reich, 2008; Schüßler, 2012), which assume that knowledge cannot be directly transmitted but must be individually constructed. This shifts the focus from the mere transmission of knowledge to the enabling of learning processes. Learning is conceived as an individual process of construction, based on meaning-making and self-activity, which emphasizes that sustainable learning cannot be achieved through instruction alone but only when learners actively construct meaning and integrate experiences into their personal frameworks of interpretation. This implies a shift in learning culture towards a vibrant learning culture shaped by a

systemic-constructivist approach to learning, acknowledging the fact *"[…] that sustainable and significant learning depends on the learners' own initiative and requires that the learning content can be recognized by the learners as meaningful to themselves"* (Arnold & Schön, 2017, p. 49).

Pedagogical practice is therefore concerned with creating conditions that foster self-regulation, motivation, and learner responsibility. Teachers and trainers are no longer regarded primarily as knowledge transmitters but as facilitators who design learning environments, stimulate reflection, and provide impulses (Schüßler, 2012).

In vocational and adult education, *Enabling Didactics* plays a central role, as the development of competencies and action-oriented skills is paramount in these contexts. In open and dynamic environments, where learners must respond to unpredictable challenges, a didactic approach is needed that fosters autonomy and personal responsibility. This resonates strongly with outcome-oriented approaches (e. g. Weinert, 2001; Karam et al., 2020), which measure educational success not in terms of the quantity of content delivered but in terms of the competencies and action capabilities learners actually acquire. Against this backdrop, Enabling Didactics has established itself as a key paradigm of modern, competence-oriented vocational education, shifting the focus from teaching to the facilitation of self-directed learning.

2.2 Outcome and Competences

Outcome-oriented didactics represent a paradigm shift in education, moving the focus from teaching to learning outcomes, from knowledge transmission to competence development. By emphasizing what learners can actually do with acquired knowledge, this approach aligns education with the demands of modern societies and labour markets. It requires new didactic strategies, assessment forms, and curriculum designs but offers the potential to make education more meaningful, effective, and future-oriented.

2.2.1 EntreComp Framework

Entrepreneurship is increasingly understood as a transversal competence that enables individuals to recognize opportunities, mobilize resources, and create value in economic, social, and cultural domains (European Commission, 2016; Lackéus, 2015). It is not limited to business creation but encompasses a mindset and skillset relevant across all spheres of life, making it a key competence for employability, active citizenship, and lifelong learning.

The *EntreComp framework* (see Figure 9.1), developed by the European Commission's Joint Research Centre, provides a systematic model to integrate

entrepreneurial competences into education and training (Bacigalupo et al., 2016). *EntreComp* defines entrepreneurship in three competence areas – Ideas and Opportunities, Resources, and Into Action – each consisting of five competences. These range from opportunity recognition, creativity, and vision to self-efficacy, financial literacy, collaboration, and initiative. Together, they reflect the multidimensional nature of entrepreneurship, which combines cognitive, behavioural, and attitudinal elements (McCallum et al., 2018).

Figure 9.1: The *EntreComp* wheel: 3 competence areas and 15 competences (McCallum et al., 2018, p. 14).

In vocational education and training (VET), *EntreComp* serves as a valuable reference point for designing competence-oriented curricula. Traditional VET systems have been criticized for focusing narrowly on occupational knowledge and specific technical skills, which risk becoming outdated in rapidly changing labour markets (Mulder, 2017). By embedding *EntreComp*, vocational education can broaden its mission: not only to qualify learners for existing professions, but also to empower them to innovate, adapt, and create new pathways for value generation (Pepin, 2012). This aligns with the broader European policy agenda, which

regards entrepreneurship education as central to fostering economic growth, social inclusion, and resilience (European Commission, 2013).

Moreover, *EntreComp* supports a modern understanding of employability that goes beyond mastering job-specific tasks. Employability today requires transversal skills such as problem-solving, initiative, teamwork, and the ability to learn continuously (Yorke, 2006). By offering a common language and conceptual structure, *EntreComp* helps educators, policymakers, and employers to align expectations and design learning settings where entrepreneurial competences can be developed and assessed. For example, project-based learning, simulations, or real-world entrepreneurial experiences can be aligned with *EntreComp* competences to provide learners with authentic opportunities to create and demonstrate value (Lackéus, 2015; European Training Foundation, 2018).

2.2.2 Outcome oriented Didactics

The relevance of *EntreComp* becomes even clearer when linked to the paradigm of outcome-oriented education (e. g. Weinert, 2001; Karam et al., 2020). Unlike input-oriented approaches, which focus on teaching content, outcome-oriented approaches emphasize demonstrable learning outcomes and competences. As Weinert (2001) defines, competences are *"[…] the cognitive abilities and skills which individuals possess or can acquire to solve certain problems, as well as the associated motivational, volitional, and social readiness and capacity to successfully and responsibly use problem solutions in variable situations*." Competence-based, outcome-oriented didactics require a redesign of teaching and assessment practices. Rychen and Salganik (2003) stress that key competences must be transferable across domains and relevant for personal, social, and economic participation. This perspective also informs the European Qualifications Framework (EQF), which explicitly emphasizes learning outcomes rather than learning inputs (European Parliament and Council, 2008). Didactically, this means that teachers must create learning environments that allow students to engage in problem-solving, project work, and reflective practice. As Klieme et al. (2003) argue in their influential report on educational standards in Germany, outcome orientation provides a framework for ensuring comparability and quality in education while respecting institutional and learner diversity.

In vocational education, outcome-oriented thinking and the *EntreComp* model mutually reinforce each other. Outcome orientation provides the methodological basis for competence-based curricula, while *EntreComp* offers a concrete framework to define and operationalize entrepreneurial competences. Together, they enable a shift from static knowledge transfer towards dynamic competence development, preparing learners to navigate uncertainty, contribute to innovation, and engage in lifelong learning.

EntreComp is of central importance for vocational education because it bridges the gap between traditional occupational training and the competence demands of contemporary society. Its alignment with outcome-oriented education ensures that vocational training does not only qualify learners for specific professions but also equips them with the entrepreneurial mindset and competences required to create value in diverse contexts.

3 Methodology

In the *StAct* project, we build on these theoretical considerations and use them as the foundation for the *StAct model* which gives young people a voice by enabling them to explore and investigate their own ideas, needs, and aspirations.

3.1 Design

We assume that exploring the individual entrepreneurial thinking and actions of students is only possible if they are involved as active participants throughout the entire research process. The students are viewed as research subjects, not as objects being studied. Their tasks go beyond merely *"[…] gathering information, analysing empirical data, and making it available to academic research*" (Smolarski & Oswald, 2010, p. 10], in the sense of acting as assistants to academic science. Instead, in *StAct*, they are seen as researchers and thus active creators of the entire process (Thomas et al., 2019).

In *StAct* a – in former projects[2,3] well-tested – research framework is created in which students, characterized by high heterogeneity (e. g., in terms of education type, gender, age, ethnic background, socio-economic status etc.), can express and explore their perspectives on entrepreneurial thinking and action in a world marked by the challenges of significant changes. The students convey their perspectives through self-directed research and exploration projects and exchange ideas with their peers, i. e., students from other schools who are researching similar topics. This took place in two research cycles of dialogue, participatory research, as well as presentation phases, all of which focus on the students and are driven by them (see Figure 9.2).

2 WYRED networked Youth Research in the Digital Society https://wyredproject.eu
3 cepnet: children's empowerment in primary schools' network https://cepnet.eu

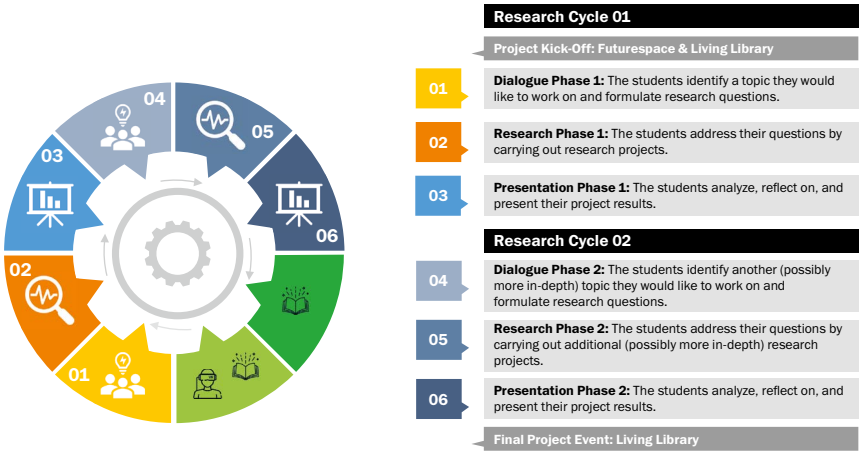

Figure 9.2: StAct Design Model

3.2 Methods

3.2.1 Sample

A total of 207 students, along with ten teachers and five accompanying team members from five schools in Vienna, participated in the project: GTVS Hahngasse (Primary School), VS Seestadt, (Primary School), MSi Geblergasse (Compulsory Secondary School), MS Quellenstraße (Compulsory Secondary School), and HTL Spengergasse (Higher Federal Technical College, Upper Level Secondary).

Of these, 132 students completed the online survey, and 60 participated in the focus groups, which aimed for an equal representation of female and male students. The gender distribution of the online survey with 46.22 % girls and 53.78 % boys, was not ideally balanced, which can be explained by the types of schools involved.

Primary students ranged in age from 8 to 14, with a peak at 9 years old, in Secondary 1 students were between 12 and 18 years old, most being 13 or 14, while Secondary 2 students ranged from 16 to 21, with the majority being 17 years old.

Additionally, in both project cycles, the teachers were interviewed (10 in total).

3.2.2 Implementation

Research Cycle 1 of the *StAct project* began in fall 2023, with schools starting at different times. It concluded with the final event on 5 June 2024, during which the students presented their (interim) project results.

A pre-/post-design was used for the evaluation of the two research cycles. Two evaluations took place: one after Cycle 1 and another after Cycle 2. The evaluation of Cycle 1 was conducted formatively to inform Cycle 2, while a summative evaluation report was compiled after Cycle 2. Specifically, the evaluation of Research Cycle 1 was carried out following the interim presentations in June 2024, and the evaluation of Cycle 2 after the final event in May 2025.

Qualitative methods, including focus groups and interviews, were employed. Both students and coaches were included in the evaluation, with age-appropriate guidelines used for the students' focus groups. The focus groups with students and interviews with coaches were conducted in person at each school.

The data were analysed using descriptive statistical methods (Bortz & Döring, 2015) alongside content analysis based on Mayring's approach (2002), which included paraphrasing, categorization, development of subcategories, extraction of quotations, and hypothesis generation.

4 Results

The outcome table (see Table 9.1) systematically illustrates which *EntreComp* competences were addressed, which outcomes were generated through project work, and which observable outcomes emerged in terms of developmental processes. From the perspective of a competence-oriented didactic approach, it can be concluded that learners did not merely acquire cognitive knowledge about "entrepreneurship", but developed entrepreneurial competences as in *EntreComp* listed.

4.1. Outcomes: Projects[4]

Over the course of the two cycles, a total of 20 projects were developed, covering a wide range of topics and employing a variety of methods. Many focused on environmental protection, while others explored issues of sustainability, nutrition, and gender equality. The diversity of the projects extended beyond their themes: students produced videos, created content for Instagram, developed digital platforms, wrote and performed plays, and expressed their ideas through collages.

The impact of these initiatives was also felt directly within the schools. Students organized events such as games and clothing swaps that involved the entire school community, demonstrating how their projects could extend beyond the classroom and foster a sense of collaboration and shared engagement among peers. Many projects further illustrate this variety and creativity, like for example:

4 For more Details: https://stact.at/?page_id=354

- A women's team at HTL Spengergasse explored the impact of "daily drugs" such as coffee, sugar, social media, and digital games.
- At GTVS Hahngasse, students not only performed a play at the final event but also compiled a cookbook featuring their favourite recipes.
- The highlight at MSi Geblergasse were interviews conducted by students with representatives from NGOs, focusing on their goals and concrete work in areas such as peace, poverty, and labour.
- The students of MS Quellenstraße placed the focus of their exploration and research activities on sustainability, recycling, and environmental protection, and presented their ideas through video productions.
- Meanwhile, the students of VS Seestadt addressed environmental protection and gender equality, creating videos and organizing a game swap event at their school.

Among the most notable achievements, the *NavigAI-tor project* from HTL Spengergasse developed an AI-supported route planning system for cargo ships in the Mediterranean, winning the national competition for Artificial Intelligence and reaching the finals of the prestigious international "Shape the Future Challenge 2024".

Additionally, the *StAct* partner school MSi Geblergasse was awarded the Young Science Quality Seal, granted by the Austrian Agency for Education and Internationalization. The seal was ceremoniously presented on June 10, 2024, by Austrian Minister of Education Martin Polaschek and *OeAD*[5] Managing Director Jakob Calice.

4.2 Outcomes: *EntreComp*

Within the evaluation, three core areas of the *EntreComp* framework were addressed: Ideas and Opportunities, Into Action, and Resources. From each, two sub-areas were selected (see Table 9.1).

Under Ideas and Opportunities, students demonstrated strong creative potential by developing diverse projects and formulating visions around global challenges such as sustainability, peace, and equality.

> "Creativity, definitely, already in the first year with the cookbook, but in the second year through the theatre play completely […] coming up with a story, designing costumes, creating the stage set […] so many creative processes definitely took place." (Teacher, GTVS Hahngasse)

5 Austrian Agency for Education and Internationalization: https://oead.at/en/

"There is definitely the possibility that we might start a company with the idea, since there could be companies interested in it. But that's still uncertain, since we will mainly deal with it after school and maybe continue something alongside that." (Student, HTL Spengergasse)

In the area of Into Action, they successfully collaborated in teams, often for the first time, learning to manage conflicts and taking initiative through active role distribution in group projects.

"And in teamwork, we actually learned a lot from others, who perhaps already had more experience with it." (Student, VS Seestadt)

"That groups were consciously formed, where it was like, okay, this is a bit mixed […] children who find it easier, with children who find it harder." (Teacher, MSi Geblergasse)

Finally, under Resources, there was little need for available materials or teacher expertise, still strengthening their self-awareness and self-efficacy, as reflected in their confidence and pride when presenting their projects publicly was given.

"Exactly, self-awareness and self-efficacy, yes, and also mobilizing others, inspiring, engaging, getting others on board." (Teacher, VS Seestadt)

"I also liked that we could tell what we did. I thought it was cool, and I enjoyed presenting it to the parents and talking about it." (Student, MS Quellenstraße)

The following Table 9.1 summarizes these exemplary examples of the teachers and students in an outcome format.

Table 9.1: *StAct Outcome Model*

Competence Area	Description of targeted competence	Observed Effects/Outcomes
Ideas and Opportunities		
Creativity	The ability to develop new and valuable ideas and rethink existing approaches creatively	A broad and diverse range of projects was developed, enabling students to fully realize their creative potential, while older students had the opportunity to reconnect with and revive their earlier talents.
Vision	The ability to create a clear idea of a desirable future and inspire others with it.	Students explored key global challenges, including future technologies, sustainability, climate protection, peace, and gender equality.

Competence Area	Description of targeted competence	Observed Effects/Outcomes
Into Action		
Working with Others	The ability to work constructively with others, make use of diversity, and build trust.	While group work had previously been unfamiliar to many students, all of them collaborated successfully in teams. Along the way, they learned to manage and resolve conflicts constructively.
Taking the Initiative	The ability to seize opportunities proactively and take action independently.	The students demonstrated initiative by developing projects together in their groups, each taking on different roles such as researcher, designer, presenter, or coordinator
Resources		
Mobilizing Resources	The ability to identify, organize, and use material, immaterial, financial, and human resources.	The necessary materials were largely provided by the schools, and the students were able to access the teachers‘ advisory expertise at any time.
Self-awareness and Self-efficacy	The ability to assess one’s strengths and weaknesses and to trust in one’s own effectiveness.	The students were very proud of their projects and presented them to each other and to adults as ‚Living Libraries‘ during the closing event.

5 Conclusion

The pedagogical orientation of the *StAct* project is grounded in a competence- and outcome-oriented approach, consistently applied within the framework of *Enabling Didactics*: According to Arnold (2012a), this approach emphasizes that learning is not limited to the transmission of predefined content but focuses on the development of action-oriented competences, which are reflected in observable outcomes and in the sustainable personal growth of learners. In line with Erpenbeck and Sauter (2013), competences are made visible not solely through knowledge tests, but through practical performance in complex project situations.

Within *StAct*, this orientation became evident as students developed, implemented, and presented entrepreneurial project ideas in small groups. The outcomes did not merely represent the products of their work – they also served as indicators of competence development. The project actively promoted the cultivation of an entrepreneurial mindset. Following Gibb (2005), participants learned to identify opportunities in their immediate environment, design creative solutions, and translate them into actionable projects.

Particularly noteworthy was the broad and diverse range of projects developed, which allowed students to fully express their creative potential. Projects addressed pressing global challenges, including future technologies, sustainability, climate protection, peace, and gender equality, fostering engagement with real-world issues.

Although collaborative group work was new for many participants, all students successfully learned to work together, navigating differences and resolving conflicts constructively. Within their groups, students assumed complementary roles – as researchers, designers, presenters, or coordinators – actively contributing to every stage of project development. Materials were largely provided by the schools, and teachers offered ongoing advisory support, allowing students to progress independently while still benefiting from guidance.

Students' pride in their achievements was clearly visible during the final "Living Libraries" event, where they presented their projects to peers and adults, highlighting both the outcomes and the competences developed throughout the process. This experience strengthened their sense of self-efficacy and confidence in their problem-solving abilities (Dehnbostel, 2015). Significant progress was also observed in social competences: group work required negotiation, conflict management, and alignment of collective goals. These observations support Arnold and Schüßler's (2010) assertion that learning in social contexts is not only cognitive but also communicative and interactive in nature.

The *StAct project* has not only imparted specific competencies but has also guided its participants into a new realm of self-directed learning. By engaging in the development and presentation of their own projects, students took ownership of their learning processes, experiencing first-hand the impact of their decisions and actions.

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Chapter 10 | From Learners to Community Members – The Educational Network voXmi and Transformation Through Language, Participation, and Shared Learning

Mehmet Fatih Tankır & Ursula Maurič

Abstract

This chapter explores the role of language and communication in fostering community building within multilingual societies. Drawing on theoretical frameworks such as translanguaging, critical language awareness, and the interdependence hypothesis, it illustrates how language education can promote participation, identity formation, and democratic school development. Using the Austrian educational network voXmi and concrete examples from educational practice, the chapter demonstrates how schools can be shaped as inclusive and language-sensitive learning environments. The reflection on the teacher's own educational biography underscores the importance of recognition, self-efficacy, and societal transformation in everyday school life.

1 Communication and the Role of Comprehensive Language Education for Community Building in a Multilingual Society

Over the past decades, the composition of school classes in Austria and across Europe has undergone profound change. Diversity and multilingualism are no longer exceptions but shape everyday school life in multifaceted ways. Children and adolescents today bring with them a wide range of languages, dialects, communicative practices, and culturally shaped modes of expression. However, this linguistic diversity often remains invisible or unwelcome – too frequently perceived in educational settings as a disturbance of the norm or even a problem (Gouma & Döll, 2023). This perception can lead to implicit or explicit language bans, suppression of non-dominant languages, or the reduction of multilingualism to individual deficits.

A particularly contested example of such regulation is the recurring political demand for a *German-only policy* during breaks and on school grounds. Such measures disregard the social function of family languages, devalue the

multilingual reality of many students, and are considered educationally questionable (Tankır, 2019, among others). Rather than imposing restrictions, schools need spaces where linguistic diversity can be actively lived – even beyond the classroom.

Against this backdrop, the understanding of communication in schools is also shifting. Language can no longer be seen merely as a tool for academic learning. It becomes evident that language itself constitutes social reality – through language, belonging is communicated, participation enabled, identity (re)constructed, and community negotiated. In educational processes, language not only reflects social reality, it actively shapes it. Who is allowed to speak at school – and in which language – has a decisive impact on who becomes visible, who can exert influence, and who is considered a member of the community.

In recent years, educational practice has increasingly embraced approaches that not only tolerate but actively integrate multilingualism as a resource. A particularly promising approach is the concept of translanguaging (García & Wei, 2014). This concept assumes that multilingual speakers do not simply switch between languages, but rather draw from a dynamic, integrated linguistic repertoire, used flexibly and contextually. Learning, therefore, occurs not in a single language, but across all available linguistic resources.[1]

This understanding is also at the heart of community building in schools: the deliberate creation of a social space where difference is not erased but made productive. Hall and Panarese (2016) argue that community building does not arise spontaneously from social coexistence – it must be intentionally developed. They identify six core conditions for successful community building, which are highly applicable to educational contexts:

1. Shared spaces – Physical and symbolic spaces must be designed to be open and accessible so that all participants feel welcome and included.
2. Intentional relationship-building – Communities emerge through consciously nurtured interpersonal relationships, grounded in trust and mutual respect.
3. Participation and Co-responsibility – Learners must be taken seriously as active subjects and included in decision-making processes.
4. Recognition of diversity – Difference is not suppressed but understood as a constitutive element of a plural community.

1 In translanguaging-friendly classrooms, students are encouraged to draw on their full linguistic repertoires in the learning process – whether brainstorming in their first language, creating multilingual texts, or giving presentations that combine multiple modes of expression. This is not just about using a variety of methods, but about recognition: students experience that their languages, ways of expressing themselves, and perspectives have a legitimate place in the classroom – not as an add-on, but as a natural and valued part of school life.

5. Shared responsibility among adults – Educators bear the responsibility of actively creating and maintaining such inclusive spaces.
6. Shared narratives and rituals – Stories, symbols, and recurring practices of community care strengthen collective belonging.

Language plays a pivotal role – not only as a means of communication, but as a medium of democratic negotiation, social relationship, and inclusive school development.

For this to succeed, educators must not view language as a static system with fixed norms, but as a social space for action. In line with the concept of Critical Language Awareness (Fairclough, 1992), they are aware of the power relations embedded in language and create communicative spaces in which participation and plurality are not hindered but made possible. Linguistic practices are inherently entangled with social power structures. Education, therefore, cannot be understood as a purely norm-driven linguistic process; it must actively engage with communicative forms, linguistic identities, and their negotiation. A pedagogically productive engagement with linguistic and cultural difference not only enables participation but also fosters reflection on social structures and individual positioning – especially within a democratically constituted school.

The Austrian educational network *voXmi*[2] – an acronym for "learning and experiencing languages from and with each other" – has been addressing these challenges for over 15 years. With a whole-institution approach, *voXmi* supports schools and preschools in implementing consistent language education – across teaching, school development, cooperation with families, and community outreach. At its core lies the conviction that all languages are of equal value and that all students bring relevant resources that can be made visible, strengthened, and expanded. Communication, in the voXmi approach, is not understood normatively, but situationally, openly, and reflectively – a perspective that transforms not only classroom instruction but also the culture of school as a social space.

2 Challenges and Effective Communication Patterns for Teachers

Schools are not merely spaces for transmitting knowledge, but also key social environments where young people can experience themselves as speaking, acting subjects – or not. In a pluralistic society, the question arises as to how school-based communication must be shaped to enable participation, embrace diversity, and spark transformation. Teachers face the challenge of navigating between institutional demands and participatory openness. They are not only transmitters

2 https://www.voxmi.at/

of knowledge but also facilitators of negotiation processes in which language plays a central role. This chapter therefore examines the communication patterns teachers need to empower students to raise their voices, take responsibility, and see themselves as active members of a democratic society.

2.1 Raising One's Voice, Mobilizing Communities, and Participating in Society

Many students – particularly those with migration backgrounds or from socio-economically disadvantaged settings – do not experience school as a space where their voice matters. Their perspectives often remain invisible; their experiences go unspoken. The challenge for teachers is to create speaking spaces where students can articulate their concerns and see themselves as capable agents.

Effective communication in this context is characterized by a dialogic stance. Teachers who actively listen, value contributions, and refrain from premature judgement open spaces for self-positioning. Formats such as storytelling circles, autobiographical writing, or language biography interviews enable learners to share their perspectives without having to conform to normative expectations. Equally important is the ability to tolerate pauses, uncertainty, and incomplete or grammatically incorrect expressions – signs of pedagogical patience and recognition.

This approach is theoretically grounded in Freire's (1977) concept of education as the practice of freedom and in the idea of pedagogical recognition described among others by Castro Varela and Mecheril (2010). In this understanding, language is not a tool of control, but a means of enabling agency, self-determination, and expression.

2.2 Strengthening Communities, Addressing Social Issues, and Fostering Democracy

Democratic education in schools is often marked by a tension: While formal structures for participation exist, student involvement frequently remains superficial. Teachers are therefore called upon not only to name democratic processes, but to make them tangible.

In terms of communication, this requires a questioning and exploratory attitude from teachers. Open-ended questions, genuine willingness to engage in dialogue, and the acceptance of controversial positions foster a culture of exchange. Participatory and critically reflective formats – such as jointly developing class rules or discussing social issues in the classroom – enable students to experience themselves as members of a community that acts collectively and assumes responsibility.

A central element here is metacommunication: Teachers should be transparent about which decisions are open to input and which are not – and why. This cultivates a realistic understanding of democracy as negotiation, not consensus.

2.3 Enabling Positive Societal Change

Finally, the question arises as to how school education can extend beyond itself – how it can equip learners to reflect on and transform societal conditions. The challenge is to not see school as an isolated institution, but as a social space that connects to students' lived realities.

Effective communication patterns in this context are project-based, reflective, and multilingual. In initiatives such as language cafés[3], podcast productions, or student newspapers, learners take on responsibility, engage in authentic communication, and co-create content. The teacher's role shifts to that of an enabler – supporting, inquiring, and encouraging reflection.

Equally important is the expansion of linguistic registers: Translanguaging approaches and creative forms of expression such as slam poetry or multilingual presentations allow students to contribute in their full linguistic complexity. This not only enhances language skills, but also fosters a sense of self-efficacy.

3 The Educational Network *voXmi*

3.1 The Role of Educational Networks in Times of Societal Challenge

Social complexity, super-diversity[4], and global crises present schools with new challenges. Increasingly, teachers cannot meet the demands associated with multilingualism, discrimination, linguistic exclusion, or societal polarization on their own. These tasks require shared expertise, collegial reflection, and long-term collaboration. In this context, educational networks are gaining significance as bottom-up structures for professional development, consultation, and school transformation. They emerge where hierarchical systems are too slow or unresponsive, and where educators seek collegial exchange on equal footing (Boos, Exner & Heitger, 2000; Heintel, 2000).

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3 This project will be explored in more detail below

4 In educational research, the term super-diversity (Vertovec, 2007) is used to refer to the growing plurality within migrant groups and the resulting complexity of differentiation in terms of origin, length of stay, legal status, social mobility, language practices, and senses of belonging. Against this backdrop, commonly used categories such as "second-language learners" or "non-German mother tongue" are increasingly inadequate for capturing the linguistic lifeworlds of young people in all their diversity and ambivalence.

The *voXmi network* exemplifies such a structure: a non-hierarchical yet well-organized platform that supports schools, teaching teams, and educators in their professional development – not through prescriptive mandates but through the collaborative development of good practice. Especially in socially challenging times, sharing ideas, negotiating positions, and learning collectively become central elements of democratic education.

As Boos et al. (2000) and Heintel (2000) emphasize, educational networks can fulfil key functions in times of societal tension. They offer structured spaces for collegial cooperation and help schools respond to complexity with flexibility and solidarity. The following characteristics illustrate the potential of networks such as *voXmi* (see Boos et al., 2000, p. 16 f.):

- they emerge in times of uncertainty and societal transformation when hierarchical structures fall short;
- they respond to a need for (communicative) equality and autonomy;
- they fulfil the desire for social belonging and support in an era of individualisation;
- they are inherently non-hierarchical and democratic in their orientation;
- they foster mutual support and relationship-building;
- they offer varied opportunities for learning and growth at all levels – from students to administrators;
- they address the need for collective learning in complex, super-diverse societies;
- they enable shared problem-solving;
- they encourage knowledge co-creation and exchange;
- they meet needs for both professional development and meaningful social connection.

3.2 What Does *voXmi* Aim to Achieve? – Referring to the *voXmi* Mission Statement

voXmi (short for "learning and experiencing languages with and from each other") was launched in 2008 to make linguistic diversity visible in schools and kindergartens and to integrate multilingualism systematically into educational practices (Maurič, 2015). At its core lies a holistic, cross-institutional approach to language-aware school development.

Coordinated by six university colleges of teacher education in Austria[5], *voXmi* currently includes over 60 member institutions across primary, lower, and upper secondary levels as well as kindergartens.

5 As of June 2025. More university colleges of teacher education are joining.

The network is built on four guiding principles (*voXmi* educational network, o. J.):

1. Recognition of the equal value of all languages involved in the educational process;
2. Promotion of diverse language learning opportunities through creative methods and projects;
3. Integration of language-sensitive teaching across all subjects;
4. Innovative use of digital technologies to expand language learning spaces and foster international exchange.

These principles reflect a commitment to viewing education not as adaptation but as active shaping. In this perspective, school becomes a space where language is no longer a marker of origin but a medium for participation and agency. *voXmi* promotes a pedagogy grounded in the principles of Global Citizenship Education (GCE) – focused on human rights, social responsibility, and multiple perspectives.

This is reflected in the network's annual thematic focus, which engages with socially relevant topics such as "Flight and Migration", "Voice Through Language", or "Inclusive Education". In doing so, *voXmi* links contemporary debates with evolving school practices (*voXmi* educational network, o. J.).

3.3 How Does *voXmi* Support Teachers in This Work?

A key aim of *voXmi* is to empower teachers as reflective facilitators of language education. Professional confidence in addressing linguistic diversity is supported through:

- continuing education, seminars, and peer exchange within the network (e. g. voXmi federal seminars),
- school development guidance using the *voXmi* checklist aligned with the Austrian Ministry of Education's quality framework (Bundesministerium Bildung, o. J.),
- mentoring by experienced *voXmi* coordinators and peer learning among equals.

Within this structure, not only new didactic routines emerge, but also evolving communication patterns: Teachers reflect on when language acts as a barrier or bridge, how to avoid labels and stereotypes, and how to create spaces in which students can express their perspectives. This leads to a transformed professional identity: The teacher no longer serves as an authoritative source of knowledge, but

as a reflective actor who fosters multilingualism, moderates learning processes, and navigates the tensions between institutional demands and societal diversity.

Moreover, the network also offers emotional support: Teachers experience themselves as part of a professional community that provides affirmation, belonging, and collective recognition. This social resonance counteracts feelings of powerlessness in everyday school life and opens up new avenues for professional self-efficacy – an especially vital potential in high-stress educational environments.

Amid the tensions of current social and educational realities – where social bonds are undermined by competition, knowledge hierarchies, and structural exclusion (Maurič, 2024, p. 69 f.) – *voXmi* stands as an example of an alternative model of professional learning: dialogic, networked, inclusive, and always tied to the question of how schools can be shaped collectively in a pluralistic society.

4 *voXmi* in Practice

4.1 Empowering Students Through Language, Participation, and Responsibility

To make the previously discussed concepts – such as collegial collaboration, the recognition of linguistic diversity, and shared responsibility in education – tangible, it is helpful to integrate concrete examples from everyday school life. It is only through practical implementation that the interplay of language education, participation, and pedagogical action in the spirit of *voXmi* becomes apparent.

The following insights stem from a multilingual and inclusive multi-grade classroom[6] in which *voXmi* is embedded as part of everyday pedagogical practice. Recurring formats such as the *Language Café* and selected classroom situations show how students are linguistically empowered and supported as active agents in educational processes.

Example 1: "For the First Time, I Stood Alone and Spoke About Chechnya"

The *Language Café*[7] is a format developed by the Erasmus Office for Internationalization at the University College of Teacher Education Vienna. It takes place four times a year – twice per semester. During the first session each semester,

6 This refers to class MA of the Praxismittelschule at the University College of Teacher Education Vienna (Pädagogische Hochschule Wien). See: https://pms.phwien.ac.at/index.php/klasse/mska/

7 https://phwien.ac.at/aktuelles/sprachencaphe-fur-alle-im-zuge-der-welcome-days-an-der-ph-wien/

staff, lecturers, and students from the MA class of the university's practice middle school offer a range of languages at individual booths. Participants are invited to present languages they speak well or that are personally significant to them. The focus is not on origin, but on self-determined engagement with language – its sounds, grammar, script, the experience of learning it, or the fascination with its expressions. The choice of language is free and independent of national or cultural affiliations. All visitors are welcome to explore the booths and engage in conversation.

At the second session, incoming Erasmus students present their languages while the university staff and students listen, engage in intercultural exchange, and learn about new languages. Thus, students from class MA participate actively once per semester – by presenting a language – and passively once – by listening and engaging with international students.

One student who spoke Chechen as her first language had participated in the café for years but never wanted to host a language booth herself. Importantly, she was never pressured or labelled as "Chechen" by her teachers. She merely observed her peers as they confidently presented languages like Albanian, Turkish, Nepali, or Arabic.

In the school year 2024/2025, she decided – entirely on her own initiative – to present Chechen for the first time. In her reflective statement afterwards, she wrote:

> "So, I never really thought of hosting my own stand in the 'Sprachencafé' (language café), due to the fact I just never had that confidence in my knowledge of Chechnya. I've been a part of it multiple times throughout the years by being with one of my friends or colleagues, but when I realized that it could really help with my ability to communicate with strangers and confidence in socializing, I started considering it. Not only that but I also know how Chechnya is not well known for it's culture and being overshadowed in Russian culture, so when I saw the chance of hosting my own stand for the first time, I took it. During the preparations I was honestly really excited about it, I felt proud of myself knowing that I would be doing this on my own without being told what to do. When the day came and the students coming up on my stand, the first encounter wasn't the best since the person wasn't asking me anything nor even looking at me. But when it came into actually talking, I just started going on from the geographical facts, too my personal favorite traditional foods. It was really exhilarating and I'm really happy with the results of it, seeing people's faces light up with learning something new." (Maryam, 13 years old)

This experience illustrates how informal formats like the *Language Café* can intentionally create spaces for linguistic and personal empowerment. The student stepped onto a stage shaped not by academic expectations or assessments, but by her own decision, her resources, and her desire to be heard.

She did not appear as a traditional *expert*, but as a speaker of her lived reality – one that is often marginalized in formal education. The café thus became a space of empowerment, recognition, and momentary, self-chosen belonging.

The teacher's role also shifted here – from a provider of knowledge to a facilitator who creates space for student agency. This is an example of participatory pedagogy, where students are not objects but subjects of their own education.

At the same time, the case highlights the importance of empowering students not only academically but also emotionally, linguistically, and trans-culturally. The opportunity to discuss one's language and heritage fosters not only communicative competencies but also strengthens students' sense of belonging and self-image as valued members of a diverse school community.

Example 2: From Silent Student to Student Representative

In fifth grade, a student (Una, 13 years old) newly joined class MA from primary school. She was notably withdrawn, rarely spoke in class, and was visibly ashamed of grammatical errors in German. It was known only that her first language was Serbian. As a *voXmi*-affiliated school, we placed particular emphasis on supporting students in their multilingualism and avoiding deficit-oriented labels. Our school principal actively supported this aim and arranged for two additional weekly support hours for students with increased needs in language and communication.

Though these were officially labelled *German support lessons*, we consciously reframed them as the *Language Club*. The goal was to move away from deficit-based language instruction toward a resource-oriented approach. Drawing on translanguaging principles (García & Wei, 2014), we focused not only on German but on the students' full linguistic repertoire. The Language Club became a space where multilingual identities were affirmed, expressive resources expanded, and communication situations explored – free from the pressure of correction or testing.

In addition to discussion formats, rhetorical exercises, and creative presentations, we engaged in projects where language was experienced as a social tool – such as *linguistic landscaping*, visits to multilingual libraries, or museum excursions.

A particularly powerful moment occurred during a visit to the Albertina Modern museum. Students were invited to form groups based on their spoken languages – Arabic, Turkish, Bosnian, Croatian, Serbian etc. – and assume the role of museum guides. Each group presented an artwork in their chosen language. Although many students were hesitant to speak their first languages in public – highlighting internalized language hierarchies and societal attitudes – the student in question surprised us all.

Despite her prior shyness, she eagerly embraced the role of curator and confidently presented a painting in Serbian. Her performance was natural, poised, and

engaging. She experienced her language as a resource, not a liability, and received public recognition for her voice. For her – and for us – it marked a turning point: She began participating more actively, gained confidence in class, and ultimately ran for and was elected student representative.

This example illustrates how pedagogical spaces can foster linguistic agency, empowerment, and community-building. The Language Club became a space of recognition that went beyond language acquisition – it affirmed that all languages matter and every voice is worth hearing.

The student's journey and the pedagogical structures supporting her growth highlight how students can be empowered socially and emotionally through participatory formats – and how language education can drive broader school development.

4.2 Teacher Reflection (Mehmet Fatih Tankır)

4.2.1 Personal Educational Biography and Pedagogical Beliefs

My own educational biography shares many parallels with those of my students. As a teacher with a non-German first language and a personal migration history, I understand well the challenges involved. I know the doubts students feel when their German skills are questioned or when they are reduced to their perceived language deficits. I also understand how multilingualism is often not recognized as a resource in a monolingual educational system.

These experiences have deeply shaped my pedagogical convictions. I want my students to see their multilingualism not as a burden but as a treasure. At the same time, as a German teacher, I consider it my responsibility to support them in acquiring the language as a key to further education and participation. While this may seem contradictory, it is in fact a productive interplay.

The interdependence hypothesis (Cummins, 2000) demonstrates that academic language development in one language positively affects other languages. The more competent students become in academic German, the more they reflect on structures, vocabulary, and rhetorical strategies in their other languages. Conversely, their German improves when they draw on their entire linguistic repertoire to understand and express complex content.

This interplay is not only visible in my classroom – it is also embedded in my own educational path. I grew up in a Turkish-speaking family without formal Turkish education. Only through my German studies and intensive engagement with academic German did my Turkish develop as well. Without schooling in Turkish, I expanded my vocabulary, syntax, and style. Today, I am often assumed to have an academic background in Turkey – despite never attending university there.

For me, this is strong evidence for the interdependence hypothesis: Strengthening the overall linguistic repertoire is key to unlocking students' full linguistic and cognitive potential. That is why I teach not only German but also help students recognize and value their linguistic diversity as a resource. The ability to think and communicate across language boundaries is, for me, a central goal of education in a democratic, multilingual society.

4.2.2 Why It Makes Sense to Be Part of an Educational Network (Keyword: Community) – and How It Shapes Communicative Patterns

As a member of the *voXmi educational network*, I have experienced first-hand the value of collegial exchange and collaborative learning. In the network, people from diverse professional backgrounds come together with a shared goal: to promote multilingualism and honour linguistic diversity. This shared vision enables us to develop cross-disciplinary projects that reach beyond our own subject areas.

Furthermore, the network provides a platform to engage with societal challenges and their impact on students. Because we all teach and live within the same society, we benefit from exchanging perspectives and co-creating strategies to support students in their real-world contexts.

Being part of a network like *voXmi* has also shaped my own communicative patterns as a teacher. Knowing that my beliefs are shared and supported by a broader community gives me confidence to integrate multilingualism more actively in my teaching. At the same time, the network encourages reflection: It invites me to question assumptions, revisit practices, and embrace the full spectrum of students' linguistic biographies as an integral part of our learning culture.

5 Summary and Concluding Reflections

This contribution has shown that language education, particularly within the context of school-based diversity, is far more than the transmission of knowledge: it is a matter of justice, belonging, and social cohesion. At its core lies the conviction that schools must not merely respond to normed ideals of language competence, but actively create spaces where students can unfold and develop their individual linguistic resources. Language is not neutral – it is an expression of power, identity, and participation. Those who are allowed to speak, help shape society. Those who are heard, begin to feel they belong.

In daily school life, it becomes clear how crucial it is to understand communication not as a purely technical process, but as a social and political act.

Drawing on theoretical concepts such as *translanguaging* (García & Wei, 2014), *critical language awareness* (Fairclough, 1992) and the *interdependence hypothesis* (Cummins, 2000), we have demonstrated the importance of actively fostering – rather than restricting – students' multilingual repertoires. This is essential for supporting linguistic agency, intercultural competence, and collective learning.

The reflection on one's own educational biography – in particular the insight that the development of academic language in one language can enhance expression in others – underscores the theoretical insights with lived experience. Strengthening students' overall linguistic repertoires is not a luxury; it is a fundamental principle of educational justice. Practical examples such as the *Language Café*, the *Language Club*, and other interactive formats illustrate how learners can become empowered speakers of and for themselves when they are granted recognition and participatory spaces.

The voXmi educational network plays a key role in this process. As a dialogically structured platform that connects educators across schools, it fosters professional orientation, exchange, and school development – and ultimately supports a shared commitment to inclusive education in an increasingly super-diverse society. In times of social polarization and pedagogical exhaustion, the sharing of concepts, collective reflection, and acts of solidarity become essential components of a democratic educational culture.

6 Final Reflection: Reimagining Schools as Agents of Social Transformation

The synthesis of theoretical perspectives, practical experience, and collective learning leads to a clear pedagogical imperative: Schools must be understood as sites of social co-construction – not despite linguistic diversity, but precisely because of it.

The positions developed here advocate for a school system that: takes seriously the lived realities of all students,

- views multilingualism not as a deficit but as a valuable resource, and
- not only trains teachers but strengthens, connects, and empowers them.

If schools are to be places of democratic negotiation, then they must also become spaces of linguistic emancipation. For language is not merely a medium of learning – it is a medium of being human.

Our special thanks go to Maryam and Una. Their willingness to reflect on their journeys and share their linguistic and personal experiences enriched our understanding of participatory and inclusive language education.

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Chapter 11 | *Recycling Heroes*: Participatory Learning for a Sustainable Future – How to Foster Awareness and Reflection

Georg Jäggle

1 Introduction

Sustainability and the circular economy have emerged as central paradigms in addressing the modern world's pressing environmental, economic, and social challenges. These principles have been integrated within the educational context to equip students with the knowledge and skills necessary to contribute to a more sustainable future. The transition from a linear economic model characterized by the "take-make-dispose" approach – to circular systems that prioritize resource efficiency, waste reduction, and material reuse has influenced educational policies and curricula globally. By embedding sustainability education in formal learning environments, institutions foster environmental stewardship and promote critical thinking and problem-solving among students. This study explores the intersection of sustainability, circular economy, and participative education within the secondary framework.

Theoretical perspectives on sustainability and circular economy provide a foundational understanding of these concepts, illustrating their significance in modern educational practices. Furthermore, participative education emphasizes active student engagement and experiential learning and has been identified as a practical pedagogical approach to sustainability education. Integrating participatory methodologies fosters collaboration, communication, and shared decision-making, empowering students to engage with sustainability challenges meaningfully. This study seeks to answer the question: How do participative education methods enhance students' understanding and engagement with sustainability and circular economy principles? The role of educational institutions in fostering participatory engagement and societal responsibility is crucial. Equally important is the need for student awareness and reflection, as deep learning about sustainability requires individuals to critically analyze their consumption patterns and environmental impact. By promoting reflective learning, educators can help students develop a personal commitment to sustainability and recognize the broader implications of their actions. By adopting innovative teaching strategies, leveraging digital tools, and incorporating real-world sustainability projects,

educators can enhance students' understanding and commitment to sustainability. This study examines sustainability education's theoretical and practical dimensions to contribute to the ongoing discourse on educational reform and environmental responsibility. The findings underscore the importance of integrating sustainability into education systems to prepare future generations for the challenges and opportunities of a rapidly changing world.

2 Sustainability and Circular Economy as a Framework for Education

The growing awareness of environmental challenges has led to integrating sustainability and circular economic concepts into education. These principles are essential in equipping students with skills to address climate change, resource depletion, and waste management. Educational institutions play a key role in fostering critical thinking and problem-solving by embedding sustainability into curricula and institutional practices. This chapter examines the theoretical foundations of sustainability and the circular economy in education. The first section discusses sustainability as an educational framework, focusing on its principles and impact. The second section explores practical implementation, addressing challenges and best practices. By analyzing case studies and innovative approaches, this chapter provides insights into integrating sustainability and circular economic principles into educational systems for a sustainable future.

Sustainability has emerged as a fundamental concept for developing societies, emphasizing the need to balance economic growth, environmental protection, and social well-being (Hnatyuka et al., 2024). Within educational institutions, sustainability is crucial in fostering awareness and responsibility among students, equipping them with the necessary knowledge to address contemporary environmental challenges (Imran et al., 2024). As outlined in the United Nations' Sustainable Development Goals (SDGs), sustainable development underscores the importance of integrating sustainable practices into various domains, including education, thereby ensuring a future-oriented approach to learning (Church et al., 2022). Sustainability could be defined as the capacity to enable the co-existence of both the earth's biosphere and human civilization. The basic premise of sustainability is that the earth's resources cannot be used, depleted, or damaged indefinitely (Portney, 2015). Sustainability concerns three significant domains: environment, society, and economy (EPA, 2015). Sub-domains of sustainability are cultural, technological, and political (James et al., 2015). The current strategies for achieving sustainability can generally be divided into three categories: population, affluence, and technology (Holdren & Ehrlich, 1974). The most promising path to sustainability is to develop new technologies that address the relationships among the environment, society, and economy, including the

design, making, transporting, use, and disposal of the product. This requires new concepts such as cultural, technological and political sustainability to achieve integrative sustainability (see Figure 11.1).

Figure 11.1: Integrates sustainability.

The circular economy represents a paradigm shift from the traditional linear economic model, which is based on the principles of take, make, and dispose, towards a system that prioritizes resource efficiency, waste reduction, and material reuse (Ab Hamid et al., 2024). Within educational settings, the integration of circular economy principles fosters innovation and critical thinking, enabling students to explore sustainable alternatives in design, production, and consumption (Yang & Zeng, 2020). Technical and Vocational Education and Training (TVET) institutions are pivotal in bridging environmental education and circular economy by embedding sustainability-focused curricula that promote renewable energy, waste management, and environmentally friendly production processes (Ab Hamid et al., 2024). Through participatory learning experiences and interdisciplinary approaches, students gain insights into sustainable resource management, eco-design, and responsible consumption, which are fundamental for fostering long-term environmental stewardship (Abdullah et al., 2024). Similarly, students exposed to sustainability education show greater ecological awareness and commitment to sustainable practices (Gupta et al., 2024).

Education is a powerful tool for fostering environmental awareness and promoting sustainable practices among students (Hnatyuka et al., 2024). By embedding sustainability principles within curricula, educational institutions can

encourage behavioural changes and empower students to contribute actively to sustainability efforts (Imran et al., 2024) One key challenge in integrating sustainability and the circular economy into education is the lack of standardized frameworks and guidelines. While various educational institutions have adopted sustainability initiatives, the absence of a unified approach often leads to inconsistencies in implementation (Church et al., 2022). Additionally, fostering interdisciplinary collaboration among different academic disciplines is essential but remains challenging due to traditional educational structures prioritizing compartmentalized knowledge (Imran et al., 2024). Despite these challenges, several best practices have emerged that illustrate the successful integration of sustainability into education. Case studies from various institutions highlight the effectiveness of experimental learning, project-based approaches, and community engagement in enhancing students' understanding of sustainability (Ab Hamid et al., 2024). For instance, programs incorporating real-world sustainability challenges, such as waste reduction initiatives and sustainable product design, provide students with practical experience and foster a deeper connection to environmental issues (Yang & Zeng, 2020). Moreover, leveraging digital tools and online resources can facilitate the dissemination of sustainability knowledge and encourage collaborative learning across diverse educational settings (Abdullah et al., 2024). Universities and vocational institutions that adopt green campus initiatives, such as zero-waste policies and renewable energy projects, serve as exemplary models for embedding sustainability within institutional operations and student life (Farliana et al., 2023). Integrating sustainability and circular economic principles in education is essential for fostering a generation of environmentally conscious professionals equipped to address global challenges. While challenges persist, innovative approaches and best practices demonstrate the feasibility and impact of sustainability-focused education.

The next section will explore participative education and engagement, examining how participatory and project-based learning can enhance students' engagement with sustainability concepts and circular economy practices.

3 Participative Education and Engagement

Education plays a fundamental role in shaping individuals and communities, and participative education has emerged as a critical approach to fostering both active citizenship and sustainable development. This chapter explores the theoretical foundations of participative education and the engagement of educational institutions in society, highlighting best practices and challenges in this domain. By incorporating participatory methodologies into education, institutions can create more inclusive and effective learning environments that empower students to become active contributors to society.

Participative education is an educational approach that emphasizes the active involvement of students and other stakeholders in the learning process. Unlike traditional education models focusing on knowledge transmission, participative education encourages collaboration, communication, and shared decision-making. The theoretical roots of participative education can be traced back to constructivist theories, such as those developed by Dewey, Piaget, and Vygotsky, who argued that learning is a social process facilitated by engagement and critical reflection (Pardjono, 2016). Historically, participative education has been linked to democratic education movements, where students are not merely recipients of information but co-creators of knowledge. This approach aligns with the principles of sustainable development, as it fosters critical thinking, problem-solving, and active engagement in societal issues (Kiss et al., 2024). Research has demonstrated that participatory education enhances motivation, fosters more profound understanding and encourages students to take responsibility for their learning (Sosnowski et al., 2022). Moreover, participative education is closely linked to sustainability education, where students actively engage in projects that address real-world problems such as climate change, resource management, and social justice (Kazlauskienė et al., 2021). Students develop the competencies needed to contribute to sustainable development through project-based learning and action research. These methods encourage reflective thinking and promote experiential learning, which is essential for tackling complex global challenges. A further dimension of participative education is its interdisciplinary nature. Integrating diverse perspectives from different academic disciplines enriches learning and fosters innovation. By collaborating with peers from various fields, students gain a holistic understanding of societal issues and develop adaptable skills that prepare them for the evolving demands of the workforce. Digital tools and open educational resources also play a crucial role in facilitating participatory learning, enabling students to access, create, and share knowledge dynamically.

Educational institutions, including schools and universities, play a crucial role as agents of societal transformation. By engaging with communities, businesses, and civil society organizations, educational institutions can foster a culture of lifelong learning and social responsibility (Brito et al., 2018). Universities, for example, serve as hubs for research, innovation, and community engagement, addressing societal challenges through participatory research and outreach programs (Fernando & Tajan, 2024). One significant way educational institutions contribute to society is through partnerships with local businesses and non-governmental organizations (NGOs). These partnerships facilitate knowledge transfer, enhance workforce readiness, and support community-based initiatives that promote sustainability. Best practices in participative education and societal engagement include Service-Learning programs, where students apply their knowledge to community-based projects and living labs, which provide real-world environments for testing sustainable solutions (Blomberg & Karasti, 2016). Additionally, integrating

participatory methodologies into curricula ensures students develop the skills and mindsets necessary for civic engagement and sustainable development (Bannon & Ehn, 2023). Furthermore, educational institutions must recognize the importance of fostering an inclusive environment where all students, regardless of background, can participate meaningfully in the learning process.

Socioeconomic disparities, cultural differences, and accessibility issues should be considered when designing participatory education programs. Inclusive pedagogical practices, such as differentiated instruction and universal design for learning, can help ensure that participatory education reaches diverse learners. The role of technology in participative education cannot be overstated. Digital platforms, collaborative tools, and online learning environments have transformed how students engage with content, collaborate with peers, and interact with educators. Virtual classrooms, discussion forums, and gamified learning experiences offer opportunities for participatory learning beyond traditional classroom settings. Leveraging these technological advancements can enhance engagement and create more personalized learning experiences. Participative education is essential for fostering sustainable development and societal engagement. By integrating participatory methodologies into educational practices, institutions can cultivate responsible and engaged citizens who contribute to social and environmental well-being. A more holistic approach to participative education can further enhance its effectiveness.

The next section will present a case study on "Recycling Heroes", a project that exemplifies participative education and community involvement in sustainability initiatives. This case study will explore the practical applications of participative education in fostering environmental awareness and active student engagement.

4 Case Study Recycling Heroes

The "Recycling Heroes" project represents an innovative approach to integrating sustainability into secondary education. As environmental challenges intensify globally, fostering an understanding of circular economic principles among students becomes imperative. This chapter delves into the project's objectives, implementation strategies, and outcomes, showcasing how it serves as a model for sustainability education. This section highlights the importance of project-based learning in promoting environmental stewardship by analyzing its goals, methodology, and the resulting educational impact.

The project "Recycling Heroes" is an exemplary model for integrating sustainability education within secondary education. It aims to enhance students' understanding of circular economic principles and their application through hands-on experiences. The primary goal of this initiative is to equip students with knowledge and skills related to waste management, resource efficiency, and

sustainable practices, thus fostering environmentally conscious behaviour (Jäggle et al., 2024). The educational approach of "Recycling Heroes" aligns with participatory and project-based learning strategies, enabling students to actively engage in problem-solving activities concerning sustainability challenges (Fernando & Tajan, 2024). By utilizing interdisciplinary methodologies, the project incorporates concepts from STEM (Science, Technology, Engineering, and Mathematics) and vocational training. This ensures that students learn theoretical aspects of sustainability and gain practical skills relevant to their future careers. Through participatory action research, students collaborate with educators, local industries, and environmental organizations to design and implement solutions that address real-world waste management issues (Kazlauskienė et al., 2021).

The implementation of the project "Recycling Heroes" follows a structured methodology emphasizing experiential learning and student participation. Based on the methodologies outlined in "Educational Practices for Improvement of Sustainability Education at Secondary School Level" (Jäggle et al., 2024), the project utilizes a project-based learning (PBL) approach, which has been clearly effective in enhancing students‘ critical thinking and problem-solving abilities. Key aspects of the implementation include: The project "Recycling Heroes" is an educational initiative grounded in *Project-Based Learning (PBL)* and designed to integrate sustainability and circular economy concepts into secondary education. The methodology follows a structured four-phase approach: *Introduction, Analysis, Design, and Implementation.*

In the first phase, students are introduced to the fundamental concepts of the *circular economy (CE) and sustainability* through theoretical lectures and hands-on experiences. Workshops at the *university* play a crucial role, allowing students to delve into sustainable product development. In these sessions, students apply the *design thinking process* to develop prototypes, such as sustainable robots, that address real-world environmental challenges with the 5-step plan (Jäggle et al, 2023). Additionally, practical field visits to waste disposal facilities provide insights into waste management practices and e-waste issues, emphasizing the recycling of electronic components' environmental and economic value.

During the analysis phase, students from *technical high schools and vocational schools* engage in brainstorming sessions to analyze sustainability challenges. They collaborate with teachers to explore potential solutions supporting the circular economy. The project promotes interdisciplinary learning, encouraging discussions between students and teachers to determine project objectives. Although project ideas may originate from either students or teachers, the final decision on project scope and implementation is made collectively by student teams. The design phase involves refining the identified solutions. Students work collaboratively to establish project deliverables, including presentations, reports, and anticipated outcomes. A key component of this phase is the iterative design process, where students analyze existing knowledge, explore best practices, and

develop prototypes for sustainable solutions. Students gain critical insights into sustainability-driven innovation and problem-solving through this hands-on approach (see Figure 11.2). In the final phase, students develop and test their prototypes. The type of project determines whether they create physical prototypes (hardware/software solutions) or conduct research and media campaigns (social awareness projects). The role of teachers is to guide and support the students, ensuring structured development. Once the projects are finalized, they are tested, showcased publicly, and evaluated by stakeholders (including experts and community members). A critical aspect of this phase is reflection, where students assess their learning experiences and refine their approaches based on feedback.

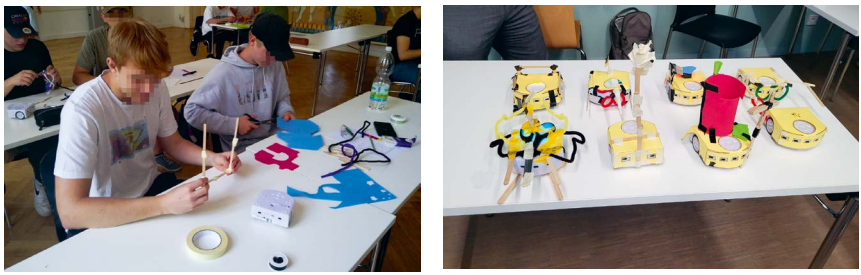

Figure 11.2: Hands-on experiences, design thinking process, educational robotics.

According to Jäggle et al. (2024), problem-based learning fosters interdisciplinary competencies, encouraging students to think beyond traditional subject boundaries and apply theoretical knowledge in practical scenarios. The participatory approach ensures that students are not passive information recipients but active learning process contributors.

Additionally, the project includes structured reflection sessions where students assess the impact of their initiatives, encouraging continuous improvement and adaptation. Integrating feedback mechanisms allows participants to refine their approaches, develop resilience in problem-solving, and build transferable skills for future sustainability initiatives.

The evaluation of the workshops on sustainable product development assessed students' learning outcomes regarding sustainability. 72 students aged 16 to 19 participated, with 15.7 % female and 84.3 % male respondents. The survey results, measured on a 5-point Likert scale, indicated that most participants strongly agreed that they had learned about e-waste ($M = 4.82$, $SD = 0.457$), followed by increased knowledge of recycling ($M = 4.42$, $SD = 0.787$) and new sustainable ideas ($M = 4.23$, $SD = 0.814$). Additionally, qualitative data analysis revealed six thematic categories: sustainability, robotics, recycling, e-waste, creativity, and product development. The most frequently mentioned themes were sustainability

(26 %) and robotics (23 %). The overall workshop rating, assessed using the Austrian school grading system, resulted in an average score of 1.8, indicating a highly positive reception and confirming the workshop's effectiveness in fostering sustainability education. The implementation of Recycling Heroes has yielded significant educational and environmental benefits.

Participating students have demonstrated increased awareness of sustainability issues and a heightened sense of responsibility towards environmental stewardship. Moreover, the project has contributed to reducing school waste by establishing effective recycling systems and encouraging resource conservation (Fernando & Tajan, 2024). In particular, the findings from Jäggle et al. (2024) highlight that project-based learning significantly enhances students' problem-solving abilities and engagement levels. Incorporating hands-on activities led to improved retention of sustainability concepts and the development of critical thinking skills. Additionally, students involved in Recycling Heroes showed greater motivation towards sustainability-oriented careers, reinforcing the project's long-term impact. Further evidence suggests that students exposed to circular economy principles through "Recycling Heroes" were likelier to adopt sustainable habits, such as reducing personal waste and actively participating in local recycling initiatives. Teachers have observed a higher degree of student participation and collaboration, fostering a sense of responsibility and teamwork. Integrating sustainability education into vocational training also provided students with practical skills, preparing them for employment in green industries (Jäggle et al., 2024). Despite its success, "Recycling Heroes" has faced several challenges. One primary issue is the availability of resources and infrastructure necessary for hands-on activities. Many schools lack adequate recycling facilities or equipment for material processing, necessitating external partnerships to bridge these gaps (Brito et al., 2018). Another challenge pertains to curriculum constraints and the need for teacher training. Integrating sustainability education within traditional subjects requires adjustments to existing lesson plans and teaching methodologies. Professional development programs are essential to equipping educators with the necessary knowledge and pedagogical skills to deliver sustainability content effectively (Kazlauskienė et al., 2021). The experiences gained from "Recycling Heroes" underscore the importance of sustainability education in fostering environmental responsibility among students. As the project moves forward, it is crucial to address the identified challenges through enhanced institutional support, increased funding for resources and expanded professional development opportunities for educators. Furthermore, scaling the project to reach a broader audience and incorporating digital tools for virtual participation could enhance its impact and accessibility (Fernando & Tajan, 2024). These reflections will be explored in the following chapter, which discusses strategic approaches for advancing sustainability education in secondary schools.

5 Conclusion and Future Strategies

This study addresses the central research question: How do participative education methods enhance students' understanding and engagement with sustainability and circular economy principles? Through participative approaches, students develop practical competencies, critical thinking skills, and reflective habits that empower them to take active roles in sustainability initiatives. Participative education bridges the gap between theoretical knowledge and real-world application by fostering meaningful engagement through hands-on experiences, interdisciplinary collaboration, and digital tools, ultimately equipping students to drive sustainable change in their communities. The integration of sustainability and circular economy principles into education has demonstrated significant potential in preparing students to address contemporary environmental challenges. Through participative education, students develop critical thinking, problem-solving skills, and a sense of responsibility toward sustainable development. However, the successful implementation of sustainability education requires overcoming persistent challenges, including limited institutional support, fragmented curricular approaches, and the need for interdisciplinary collaboration.

Future strategies for advancing sustainability education should prioritize a holistic and integrative approach that transcends disciplinary boundaries (Farliana et al., 2023). Educational institutions should adopt standardized sustainability frameworks that align with international goals such as the United Nations Sustainable Development Goals (SDGs) (Imran et al., 2024). Policy reforms at institutional and governmental levels should support the inclusion of sustainability education across curricula, ensuring consistency and coherence in its implementation (Hnatyuka et al., 2024). Interdisciplinary collaboration is another essential strategy for enhancing sustainability education (Kazlauskienė et al., 2021). Partnerships between educational institutions, industries, and community organizations can provide students with hands-on experiences and exposure to real-world sustainability initiatives (Ab Hamid et al., 2024). Programs that incorporate project-based learning, Service-Learning, and internships in sustainable industries can bridge the gap between theoretical knowledge and practical application (Yang & Zeng, 2020).

The role of digital technologies in sustainability education cannot be understated (Fernando & Tajan, 2024). Online learning platforms, virtual simulations, and digital resources offer innovative ways to engage students in sustainability topics (Kazlauskienė et al., 2021). By leveraging technology, educators can create interactive and immersive learning experiences that enhance student engagement and knowledge retention (Yang & Zeng, 2020). Additionally, digital collaboration tools facilitate global networking and knowledge exchange, allowing students to engage with sustainability issues on a broader scale (Ab Hamid et al., 2024).

Institutional commitment to sustainability should extend beyond curricula to campus operations and policies. Universities and vocational institutions can lead by example through green campus initiatives, including renewable energy adoption, waste reduction programs, and sustainable infrastructure. By embedding sustainability into institutional culture, educational institutions can reinforce the importance of environmental responsibility among students and staff.

Ultimately, sustainability education must emphasize active engagement, innovation, and continuous improvement. Educators should incorporate product development as a core component, ensuring students create tangible learning artifacts like prototypes, reports, or sustainability action plans to visualize progress and to share outcomes (Lammer, Weiss & Vincze, 2015). Reflection loops should be integrated, allowing students to periodically reassess their learning, refine solutions, and develop deeper insights. Open discussions encourage debate and diverse perspectives, reinforcing sustainability awareness. Structured learning journals facilitate self-assessment and continuous development. Teachers should promote participatory approaches, such as collaborative design, student-led sustainability initiatives, and interdisciplinary projects, to foster problem-solving and creativity. By embedding these strategies, sustainability education can become more engaging, dynamic, and impactful.

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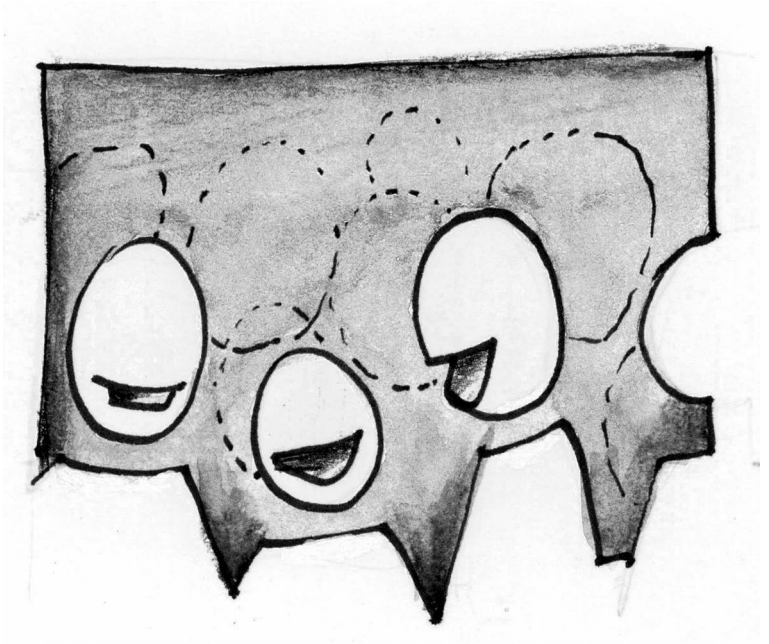
Part V | Designing Schools for Enablement



Drawing by Stefanie Egger

Chapter 12 | Designing a Classroom (School) for Enablement

Stefanie Egger & Christian Lepenik

The first axiom of the communication theorist, philosopher, and psychotherapist Paul Watzlawick states: "One cannot not communicate". You work in diverse contexts as information and industrial designers and claim: "One cannot not design". What precisely do you mean by that?
We are repeatedly confronted with the wish that a product or a space should be made entirely neutral or simply plain. And this is precisely where it becomes evident how much *Design* is a form of communication.

As human beings, we perceive our surroundings both consciously and unconsciously, and we derive possible actions from them, engaging with whatever is present. When we encounter an environment that is simple or seemingly thoughtlessly designed, we react intuitively to it in exactly the same way as we do to particularly well-designed environments. We may, for instance, immediately feel comfortable and welcome or confined, perhaps even threatened. This is a natural, unavoidable reaction. Design decisions are always being made. Sometimes they happen by accident, but when undertaken professionally, they should be made deliberately. Concretely, this means that even unintentionally designed spaces already contain an implicit function or assumption regarding their use, even when there is an attempt to keep them "neutral". The architect Christopher Alexander describes this in his *Pattern Theory*, showing how a simple intervention in a space can fundamentally alter its character. He uses the example of a dot on a white sheet of paper that redefines the entire sheet. The same applies to a single table in an otherwise empty classroom: the table becomes a central element and influences both attention and interaction.

Can we then conclude that every design already contains an implicitly embedded function?
Yes, one could put it that way, and that is precisely why we advocate for deliberate design, or rather an awareness of *Gestaltbarkeit* (designability), in order to achieve as intentional an outcome as possible. Once it has been decided that a table is to be placed in a room, decisions about its position, angle, and height become unavoidable. These – hopefully conscious – decisions already determine how the table will be used, who can use it, how many tables there will be, and how they relate to one another. All of this happens long before questions of atmosphere, colour, or materiality arise. The design of learning environments should

therefore be considered from the ground up, as it directly influences how both students and teachers learn and work. Innovative spatial solutions based on pedagogical concepts can support learning success and foster a positive educational environment.

For example, if I assume that there will probably be twenty or more people in a given space, I will hardly place a single table there – unless that table is meant for a very specific purpose. I will most likely consider what kind of seating arrangements the space should include. If I know that the group will consist, for example, of wheelchair users, I must prepare the room accordingly – quite differently from how I would if the group preferred to sit or gather on the floor because they wanted to use the space as an exercise room.

So how does deliberate design then come into play?
The table already exists in relation to the room from the very beginning. It shapes the possibilities for action within the space and, in turn, is influenced by factors such as light, window positions, and entrances. The arrangement of the table can suggest an implicit chronological sequence of how the room is to be used. Different table layouts enable different forms of interaction and activity. In an educational context, table arrangements can also represent various interaction patterns and hierarchies – one only has to think of the spatial layout in a courtroom or a church.

The intention behind spatial design is crucial, as it directly affects how power dynamics between users manifest themselves. Particularly with familiar concepts like classrooms, there is a danger of unconsciously reproducing stereotypical assumptions. To avoid this, it can be useful to refrain from using certain terminology during the planning process and instead ask more concrete questions. Rather than referring descriptively to a "classroom", one might define the space more neutrally – perhaps as a place where a given number of people can optimally carry out specific activities for a set period of time. This approach allows for more open, purpose-driven planning that breaks away from preconceived notions and enables innovative solutions.

That would already be a conscious decision – to open up stereotypical terms for new meanings – and corresponds to the deliberate design process you advocate. What would be the concrete elements of such a conscious design process?
That depends on the specific project. Take, for example, the newly built *Student Center* at Scots College in Sydney, for which we developed the interior utilisation concept. A major challenge there was to accommodate the specific requirements of different departments and functional areas. Various departments, the library, student counselling, and lunch service all had to be housed within a limited space. The key to successful spatial design lies in abstracting these requirements: How do they influence the myriad interactions that occur within the school? How can spaces be

optimally arranged according to functional groups? How can we best identify what the actual needs are? Once all relevant data for the design process have been collected, a crucial distinction must be made between fixed and variable constraints. There is little freedom to redesign elements such as doors, windows, or columns in an already completed building. But aspects such as accessibility between floors or opening hours may still allow for flexibility. Room allocation, by contrast, is often quite easy to change. In the redesign process, it is about finding creative solutions within the fixed constraints and optimally using the variable ones to meet everyone's needs.

In our work, the main concern was to ensure that the building functions holistically – that it supports and enables various interactions and workflows in everyday school life. These workflows must be translated on site into spatial arrangements and made available for as many different uses as possible. For larger groups, dynamics such as lunch logistics and break structures play as important a role as events and learning situations (see Figures 12.1 and 12.2).

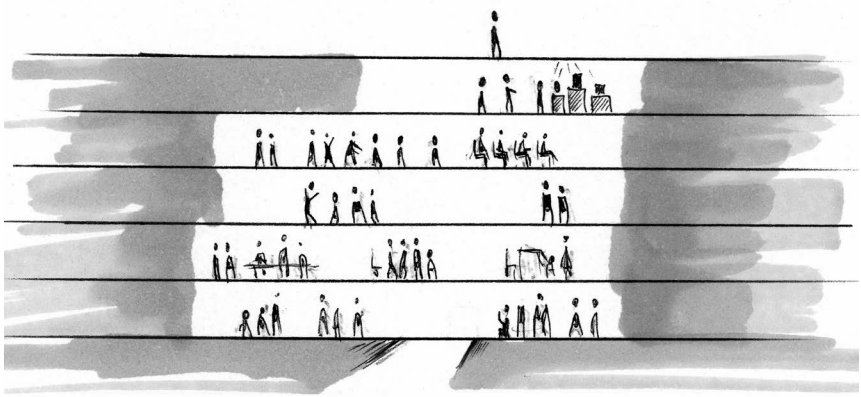


Figure 12.1: Vertical layering of activities and interactions within the school. Drawing by Stefanie Egger.

Another concrete example of this approach would be spaces for confidential conversations. These must meet specific quality criteria such as acoustic privacy, visual shielding, and an undisturbed atmosphere. If a space fulfils these requirements, it can be used flexibly – for parent-teacher meetings, counselling sessions, or individual study.

In this project, we identified that the function of "confidential conversations" was essential to several core types of interaction within the school, and we considered where in the building these could best be accommodated. Ideally, spatial positioning can simultaneously help resolve other issues. We therefore grouped functions rather than institutions. Each part of the building offers different

preconditions – ceiling heights, daylight, access points, or patterns of movement throughout the day.

We thus approached the entire design process as a kind of negotiation: Which areas are best suited for which needs? Who can and should take part in these decisions? Who will use the spaces, and who will maintain them? The central task of this design process was to determine which services could be best located in which parts of the building.

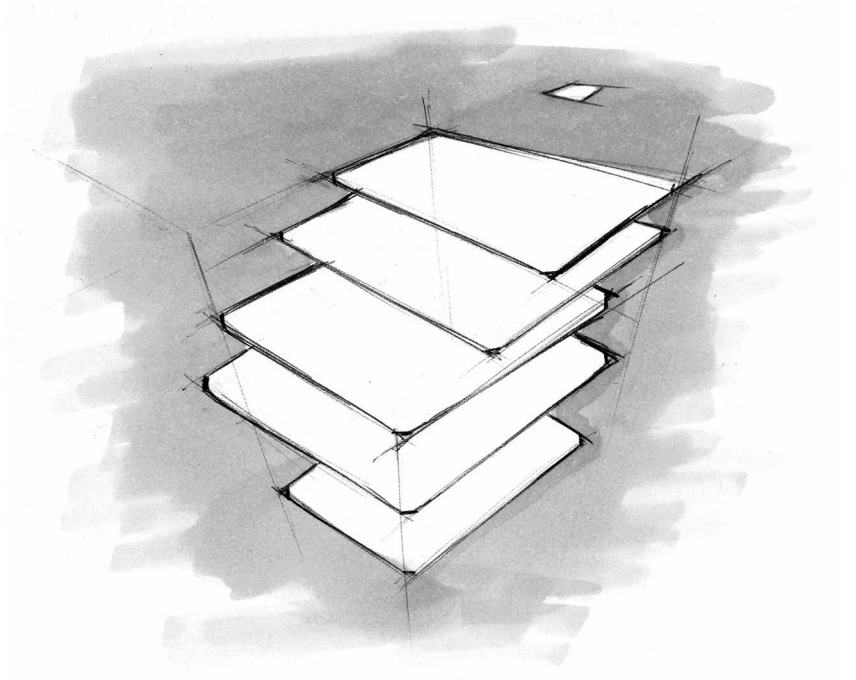


Figure 12.2: Overlapping layers illustrate spatial and functional interconnections. Drawing by Stefanie Egger.

What other services did you identify as essential to the functioning of the school and building?

Many familiar functions are reflected throughout the new building. The entrance area should provide a generous and welcoming reception. In the lunchrooms, large numbers of people must be served efficiently in a short period. The library demands quiet and concentration for individual work, while the foyer focuses on exchange and communication. Whether seating is provided there – and how it is arranged – has a significant influence on how visitors experience the building. At the same time, new functions were introduced that had not previously been established, such

as a room for reflection or a *Sensory Room*, developed together with the *Learning Center*, to allow students to relieve stress without disturbing others.

Throughout the building, special attention was paid to encouraging *Casual Collisions* – spontaneous encounters on staircases or in communal areas – to promote interaction among people from different departments. For example, not having one's own coffee machine in the office can motivate people to fetch their coffee elsewhere, setting movement and encounters in motion. These additional "coffee-seeking" efforts brought another advantage: integrating counselling services for students more discreetly throughout the building. In the old building, counselling was stigmatised because it was visible who went there or was sent there. The decentralised integration of counselling spaces now allows students to use these services far more unobtrusively and even to engage in informal conversation with counsellors.

Further *Casual Collisions* are encouraged by, for instance, not giving teachers their own staffroom but instead letting everyone share the same dining area, creating opportunities for spontaneous exchange.

You are not speaking about the single classroom per se, but about the surrounding facilities. Did you also work on the individual rooms themselves – the kind of classroom one traditionally imagines, where a class gathers for lessons?

We consciously try to avoid using conventional terms like *Schule* (school), *Klassenraum* (classroom), or *Unterricht* (lessons) when designing educational spaces, because such words trigger preconceived notions and limit potential. Instead, we attempt to approach the actual functional requirements of the space more closely. If, for example, I want to design a room in which it is stimulating and effortless for young people to listen to a speaker, I imagine something quite different from the typical classroom most people picture when they hear "school class." If, from the outset, the goal is to facilitate different forms of learning within a building – from individual reflection to group work – then the key question becomes: what spatial conditions does a specific learning situation require? Concentrated literary research, for instance, needs a quieter environment with subdued acoustics and appropriate lighting, whereas group discussions call for open areas with flexible furniture. We also deliberately avoid naming rooms too early, focusing instead on ensuring that they are functionally capable of fulfilling their intended purpose. Only at a later stage did we introduce narrative concepts into the school in Sydney to create emotional resonance. One area with high ceilings, darker colours, and blue carpeting, for example, was developed around the theme of "Ocean" – here, the *Sensory Room* described earlier, with its colourful play of lights, fits harmoniously into the idea of a "coral reef."

Another example of a seamlessly integrated solution is a custom-built wall unit with small removable stools. These can be pulled out like drawers and used

as seating while simultaneously providing storage for jackets or bags. When not in use, they can be neatly stowed away, transforming into decorative textile panels. It is particularly important to us that such spatial concepts come alive only through appropriate rituals and usage practices. Without these, a space loses its effect – it is always about how users experience and adopt it.

Design thus operates on two levels: a functional one, which adapts the space to users' needs, and a narrative one, which creates identification and orientation.

How do you develop these narratives for your design concepts?
Usually like detectives. We do not so much *create* the narrative as *discover* it. The narrative must belong to the school itself. In such projects, questions of identity play a central role – both for the building as a whole and for its individual spaces. We believe that the ultimate answer to this cannot come directly from us as designers; it must emerge from within the school, in alignment with its values and language. We play an essential facilitating role in that process: often, we find numerous clues in the site's history, existing artworks, and among the people who have worked at the school for years. When we repeatedly hear that the school accompanies young people on a developmental journey – from their first day to the moment they graduate – it makes sense to translate this process of growing up, maturing, and overcoming challenges into a narrative. The goal of becoming a reflective, responsible individual lends itself well to a broader story framework. The focus, therefore, is on the students. The building should symbolically reflect this shared developmental journey and each person's individual growth.

The central question then becomes: who are the building's primary users? In most cases, it is the students – not the teachers or parents. We therefore focus on identifying which themes and stories resonate with the students while also reflecting the school's identity. As designers, we often sense intuitively whether a concept works. When a suggestion sparks immediate enthusiasm or enriches discussion, we know we are on the right path. When an idea fails to resonate, there is little point in pursuing it further. The concepts must grow organically out of the school. The best approaches, in our experience, arise through attentive listening, careful observation, and dialogue. We try to distil the cultural characteristics of the school and reflect them back in the form of proposals – not as an imposed vision, but as a mirror of what already exists. When such a proposal is received with genuine enthusiasm, we know we have found a concept that will carry the project forward.

What methods did you use to understand the needs and wishes of the different user groups for the spatial design?
At the start of the project, we conducted a comprehensive needs assessment. In this phase, we held confidential conversations with all departments involved in shaping the emerging space. The headmaster actively supported this initiative, which placed us in a favourable position.

Our initial aim was to gain as complete an overview as possible. We held numerous wide-ranging conversations across departments, rather than delving too deeply into any single area. This first phase had to take place on site, because essential information is often found between the lines. We used this period intensively to gather as much information as possible without immediately interpreting or evaluating it. We followed the principle *to never "distort something into clarity"* – deliberately maintaining initial ambiguity or multiplicity of meaning. Our approach aligns closely with the *Double Diamond* model: in the first, divergent phase, the goal is to "design the right thing" – to understand the problem and identify an appropriate solution. Only in the second phase do we focus on "designing the thing right," developing the actual solution in detail. This method enabled us at Scots College to capture the long-standing efforts and excellent ideas of many contributors and to incorporate them meaningfully into our design process.

However, most of our insights came through systematic observation of student behaviour. We watched how students moved through and used different spaces, and how they left them behind. These observations provided valuable insights into their actual needs and behaviours – insights that were crucial for the spatial design.

That must have meant encountering many different perspectives – differing views on what should actually happen. How did you deal with that?
We believe it is important that there are differing opinions on almost every aspect. You can almost feel the tension when strong, opposing interests collide. In a way, as designers, we are on a diplomatic mission – perhaps that is often our most important task. A clear example is a recurring tension in educational design: a building should primarily serve the students, enabling learning and interaction among large groups, while also providing opportunities for personal counselling and development. This creates two conflicting spatial demands: the building should be open, inviting, and accessible, yet also contain discreet, enclosed areas that enable confidential conversation.

This illustrates that design is often a balancing act – a continual negotiation between opposing needs to find a solution that satisfies both. As designers, we consciously adopt a neutral, mediating position. It is not about immortalising ourselves, but about creating something that genuinely reflects the school's needs and identity.

So you had to balance the expectations of the school leadership and staff with what the students were meant to experience? Who ultimately decides whether the design process has achieved its goal?
That touches a crucial point, because these expectations are often not clearly defined. This is typical in design: one frequently works with clients who will never use the end product in the intended way. A simple example is a child's dentist

chair – the decision is made by the dentist, but whether the child returns depends on the parents. The dentist, therefore, tries to convince the parents, even though it is the child who has the actual experience. This dynamic – someone choosing something for another person entirely – is common in design. School projects reflect the same pattern: decisions are usually made by adults, while students, the main users, have little say. We therefore strive to integrate their perspective as much as possible wherever we can.

Especially in contentious projects, we try early on to clarify who ultimately has the authority to judge whether the result is successful. Sometimes we ourselves may not be entirely convinced – but then we at least know whom we need to convince to reach a broadly satisfactory solution.

How can all participants – truly all target groups – be included meaningfully?
The importance of non-verbal methods in design processes cannot be overstated. Such approaches allow for more inclusive participation by involving people who may not express themselves easily in words or who are often overlooked in traditional decision-making structures. As designers and design researchers, we must sharpen our observational skills and act as researchers carefully watching to discern users' needs and how these are manifested. We then form hypotheses, which we subsequently put up for verification. Sometimes we are immediately correct; other times, feedback reveals that our assumptions need adjustment.

Another key factor is involving all relevant people who play a role in the design process. The designer's task is primarily to facilitate – to act as a methodological expert. The specific expertise, for instance about the school itself, comes from the on-site experts. We assume that, over the course of the project, we will encounter the right experts and integrate their knowledge. And we can certainly help uncover things that are so self-evident to the target group that they have become invisible – routines, ingrained processes, and unexamined habits. Through careful observation and pointed questioning, such aspects can be made visible – and therefore designable.

In the school context – what role can students play? Would you consider them "experts on site"? How can hierarchical boundaries be addressed?
For us, involving students is absolutely essential. However, one must carefully determine in what ways students can and should act as experts. We believe that students would indeed be open to experimenting with flatter hierarchies, though we are not sure how many schools would be willing to challenge existing structures to that extent – for instance, by sending teachers, administrators, maintenance staff, and students together into a *Design Sprint*. But when one stays genuinely committed to such participation, one often hears things that, in retrospect, one realises should have been heard much earlier – sometimes only upon second listening. We would love to see far more settings in which students can be

properly heard. We are convinced that good design solutions always include all addressees of the design – and that always means the students as well.

Hierarchy, however, plays a significant role. Decision-making in the design process cannot ignore it. Yet it can be extremely enriching to temporarily create equality and equivalence within a specific scenario. With good facilitation, this can lead to eye-opening results.

From time to time, it is essential to question whether things are the way they are for good reason – or whether they need to change in order to progress. In design processes, we are often allowed to ask mediating questions that the participants themselves could not pose to one another. This is a vital function because it generates conversations that otherwise would not occur – and these conversations are often the most helpful for finding solutions.

When we speak of giving everyone – especially children – a voice, would you say that mutual listening is the foremost method?

Yes, absolutely. You can call into the forest and either hear nothing back – or only your own echo. If I truly listen to others and take them seriously, I must also be willing to question and, if necessary, abandon my own assumptions. At the same time, the feeling of being heard plays a major role – and actually *being* heard is something else again. All these aspects are important, though difficult to measure. Even the feeling of being involved in a process is immensely valuable. When a building takes shape and I feel part of its creation, my identification with it grows. Yet one must be honest: such processes are rarely, if ever, democratic. Students do not have the same say as teachers or decision-makers. And by the time new buildings and learning spaces are realised, it is often the next generation of students who benefit from the previous cohort's decisions. Nevertheless, everyone can make better decisions through genuine listening. The point is not to give all voices equal weight, but to ensure that relevant perspectives are heard and considered.

In established institutions, hierarchies and unspoken rules are often deeply ingrained. Everyone relies on their stability. As external consultants, we can occasionally question these structures – and that is what makes our perspective so valuable. Of course, this is also the fine line designers must walk: between a sincere design ambition and the cliché of merely "adding colour".

That, however, is not yet the final step in a design process. How do you conclude such a process and move into implementation?

It is absolutely essential to enter a prototype phase before final production – to test ideas practically. We often rely on simple materials, such as cardboard or roughly assembled wooden boards, to test whether a concept works cost-effectively. While imagination allows us to assess many things, not everything can be evaluated in theory. I might imagine, for instance, that a small study niche

would make me feel sheltered – but only when I try it out might I realise that it bothers me not to see what happens to my left and right. Such spatial impressions can be made tangible immediately with simple means. When it comes to realistically assessing the effect of a space, prototypes are indispensable. They allow us to explore different layouts, compare them, and instantly see what works and what doesn't.

Through targeted questioning, new perspectives can be opened up. We consider a design process successful when we succeed in equipping those for whom we design with the right tools to uncover the latent potentials themselves.

Editors' Note

This text presents the transcription of an interview conducted by Sabine Zauchner and Reinhard Bauer with Stefanie Egger and Christian Lepenik on January 11, 2025

Chapter 13 | Spatial Insights – How a School Redevelopment Process becomes a Living Example of Democratic Co-Creation

nonconform: Katharina Forster, Maria Isabettini & Caren Ohrhallinger

We are not born as democrats, it is a role that must be learned. And it cannot be acquired through knowledge alone. Children and young people need role models, open processes of participation, and spaces for active experimentation in which successful communication and democratic co-creation can be experienced in practice.

A participatory school redevelopment process offers the opportunity to create an open space for communication, for perceiving perspectives and needs, and for shaping things together. Through this, children and young people gather implicit experiences that strengthen democracy. They learn that a liberal democratic society depends on the understanding that the freedom to participate always entails responsibility. In such a process, it becomes tangible that it is not about particular interests but about the well-being of the entire school community. By being involved in shaping their learning environments, they experience that each individual can make a contribution. This not only fosters a sense of responsibility but also builds confidence in their own agency.

When children, young people, educators, representatives from administration and school authorities, and planners work together on the school of the future, what emerges are not only good spaces but also enduring relationships and a shared sense of responsibility.

We accompany school space development and conversion processes. In doing so, we see ourselves as translators between pedagogical, organisational, and spatial requirements. Our task is to capture the wishes and needs of the diverse people involved and make the underlying demands visible. From this, we develop a jointly supported vision and translate it into spatial concepts – the foundation for the entire planning, implementation, and appropriation process, with the goal of creating life-affirming and future-oriented learning environments within existing structures. Each project has different preconditions; we learn continuously and accumulate our insights. These we wish to share here – as encouragement for others to regard their own school as a place of shared design.

1 Space for a Change of Perspective

1.1 From "What's missing?" to "What is really needed?"

Many building processes begin with an apparently straightforward spatial requirement: a place is missing where children can eat lunch, a classroom is lacking, or there are insufficient rooms for all-day schooling – therefore, a new canteen, an additional classroom, or more after-school spaces are required. Yet often it becomes clear that what first appears to be a spatial problem turns out, upon closer inspection, to be a more complex organisational or pedagogical challenge – or even an opportunity to create far greater value for the entire school community through an integrated approach.

At the beginning of each process, we therefore ask whether what is believed to be needed is indeed what is sustainable and future-proof. This reflection usually shows that far less needs to be built than initially assumed but that the existing can be used far more intelligently!

Two projects in listed historic buildings – one in Austria, one in Germany – illustrate how strongly preconceived solution images shape planning, and how vital it is to enable a shift in perspective. In both cases, the analysis of the existing buildings concluded that the best solution would be to convert the attic to accommodate additional classrooms. The idea: to extend the familiar system of corridor and classroom by another storey despite the considerable structural effort, costs, and risks this entailed. This approach followed a familiar pattern of thought: create more area to gain more space, without questioning the underlying logic of the system itself. But therein lay the crux. What appeared to be an obvious solution revealed itself in the participatory process as merely a "carry-on-as-before": a simple addition of one-dimensional room structures that ultimately failed to address the actual questions of school development or the challenges of the existing fabric. The real pedagogical and organisational issues such as all-day operation, multi-professional teams, differentiated learning formats, or new educational concepts remained untouched. Rather than enabling change, this would merely have extended outdated structures: long corridors, rigid classroom logic, little flexibility, and low spatial quality.

1.2 An "Ideas Workshop" – a space where perspectives open up

Before actual project planning or renovation begins, there needs to be a preliminary *Phase Zero* devoted to clarifying foundations and defining goals. In this phase, the actual usage needs are described and the course for a future-oriented school is set. In our processes, we often begin *Phase Zero* with an *Ideas Workshop* (see Figure 13.1).

Figure 13.1: Ideas Workshop. Photo by nonconform.

Together with all members of the school community, the client, the administration, and those responsible for implementation, we develop a viable vision for the future. This phase is not merely a methodological step but also a space for relationship-building, team development, school development, and familiarisation with the spatial potential. How should learning be organised in future? What structures, relationships, and processes are required? Which spaces can support these? What spatial structures form the starting point? These and similar questions are discussed, because rethinking school spaces demands a new understanding from all those involved in the processes of space production and use to jointly develop new solutions through the interplay of needs, perspectives, and professional expertise.

During an *Ideas Workshop*, we invite everyone to collaborate intensively on site over a short period. The advantage is that decisions become transparent and comprehensible through the inclusion of multiple perspectives. We create room for different groups to express their needs without judgement and pay special attention to addressing students directly – without the filtering of teachers.

For example, with students we conduct dream journeys: equipped with "antennas" and "future glasses", they imaginatively visit their dream school of the future (see Figure 13.2).

Through activating questions, we encourage children to articulate their ideas about what would make them feel comfortable throughout the school day. From the documented drawings and shared stories, spatial needs can then be derived (see Figure 13.3). Or we work with a student council founded specifically for the project, discussing ideas and requirements and formulating shared goals.

Figure 13.2: Students visit their dream school of the future. Photo by nonconform.

Figure 13.3: Deriving spatial needs from shared stories: Key themes derived from the participatory workshop, e. g. food and cooking together, digitalization and automation, relaxation, emotional well-being, and sense of belonging. Photo by nonconform.

1.3 Bringing everyone to the table

The *Ideas Workshop* fosters a creative atmosphere that promotes mutual listening and the consideration of issues from different perspectives. This builds a new understanding among participants and, above all, shifts focus to the needs of the primary users – the children, young people, and educators. Spatial, organisational, and pedagogical perspectives are viewed together and overlaid to create genuine added value for the school system, not just for individual functions but for the organism as a whole.

By collectively laying all framework conditions and possibilities "on the table", a change of thinking becomes possible. Through open dialogue, deep engagement with actual usage needs, and the participation of all stakeholders – from administration to heritage protection and the extended school community – it becomes clear, as in the examples above: a future-ready school can and should be conceived differently from what has been customary in the past. Together, concepts emerge that reorganise and upgrade existing areas, pedagogically activate corridors, and supplement missing spatial qualities where necessary instead of merely adding floor area. This is how even old buildings can become future-oriented schools that make better use of what exists and add only what is truly needed (see Figure 13.4).

Figure 13.4: Learning niches transform the corridor into an active educational space. Photo by Kurt Hörbst.

2 Space for the Unexpected

2.1 Processes for agile action

Participation does not merely mean having a say; it also means thinking anew together –without knowing the final solution in advance. At the start, we cannot know or define everything. The only certainty is that things will change. We therefore need processes that leave room for the unforeseen, designs that can respond, and users who are willing to appropriate their spaces gradually, ideally with some guidance.

We therefore advocate for "white spaces" in every plan. These can be reserved areas whose use will be defined only later, after real-life testing. Such spaces leave room for the unanticipated and for genuine appropriation. However, these "white spaces" must also be accompanied by budgets for the appropriation phase, so that they can later be furnished and activated once those who inhabit the building daily have had the chance to explore, experiment, and learn through use, allowing the social system to grow organically.

2.2 Patience and continuity in the process

Where openness prevails, responsibility and continuity must not be lacking. As advocates for users and as *participatory quality-assuring spatial experts*, we act as mediators between planning and use. The school community is supported in building a lasting relationship with the building, across all planning, implementation, and appropriation phases. A process that is not continuously accompanied up to the point of occupation remains dependent on chance and risks outcomes that fall short of potential. It is therefore essential to ensure throughout that nothing essential is lost and that the opportunities created at the outset are carried through to implementation and appropriation.

As completion nears, budgets, time, and energy often dwindle – yet precisely then, the jointly developed concepts, the agreed open spaces, and the intended synergies must be realised. The transition between *Phase Zero* and planning, procurement, and procedure selection are critical points at which too often it is assumed that the user-developed results of *Phase Zero* will sufficiently inform design. Experience shows that this is not always the case. Frequently, the concepts are implemented spatially, but with no flexibility in materiality or furnishing; nor is there sufficient time to align pedagogy and organisation with the new structures. The result: theoretically versatile spaces that, in practice, remain empty or underused. Only continuous user involvement across all process phases provides the foundation for planners to respond empathically to needs, concerns, and boundaries. Even in the appropriation phase – once the building is completed and

in use – nothing is self-explanatory. This is where *Phase 10* comes in: we accompany school communities during occupation to ensure that the spatial potential is realised and intended synergies become lived practice (see Figure 13.5).

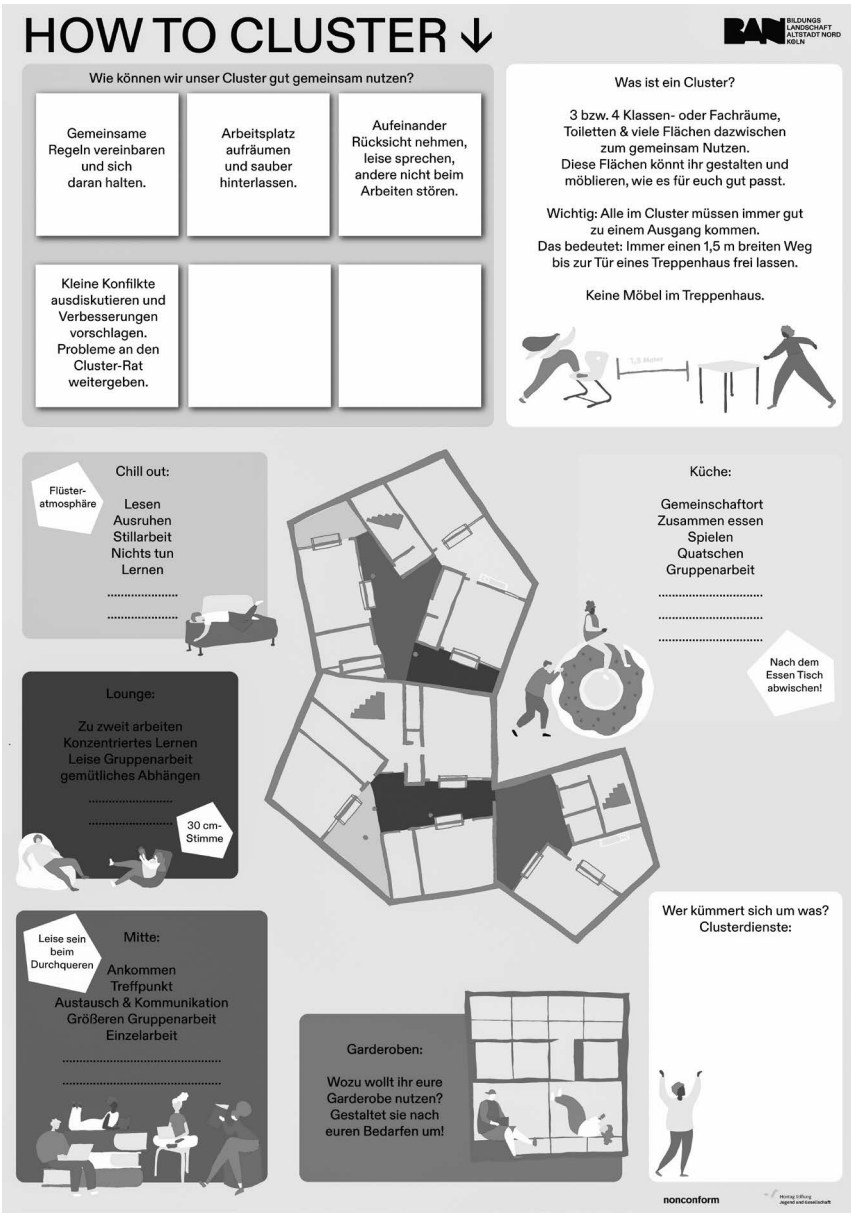


Figure 13.5: "How to Cluster" – rules and spatial guidelines for shared use of learning clusters. Graphic by nonconform.

Because good school architecture does not work automatically, just as poor conditions do not automatically prevent success. Appropriation must be built into the project from the outset as an externally supported phase, both temporally and financially. This effort is well invested: what is not used because of poor organisation or lacking spatial quality has effectively been built in vain.

3 Space for Connectivity

3.1 Everything needed already exists

Truly future-oriented solutions emerge when we begin to think beyond the boundaries of individual buildings and plots. Schools should always be conceived as part of the public realm. The aim is not merely to make school buildings multi-functional; the real opportunity lies in using public spaces and existing buildings in the surrounding area as extensions of the school (see Figure 13.6).

Figure 13.6: Students identify local places and resources that could extend the school into its surroundings. Photo by nonconform.

A striking example is the *Evangelisches Oberstufenrealgymnasium ROSE* in Linz (Austria), developed in transonymous authorship between architect Michael Zinner and principal Ulrike Schmidt-Zachl. By moving into a repurposed

industrial site – the former *Tabakfabrik* (tobacco factory) – the school fundamentally reinterpreted its spatial, organisational, and pedagogical concepts. The school does not confine itself to its own premises: all specialist teaching rooms are distributed throughout the district. Workshops, movement spaces, and other shared infrastructures are available through diverse cooperation agreements. Journeys through the city are integrated into the school's rhythm and become additional learning spaces. This sharing culture creates a new quality of schooling, decentralised, networked, resource-efficient, and community-building.

3.2 Connecting schools to their social fabric

Another example comes from a small village in Lower Saxony. The two-stream half-day primary school, together with an independent after-school club, is to become a full-day school. Like many municipalities, it faces the challenge of providing both spatial and human resources to ensure quality full-day education. At the same time, local associations and initiatives – vital to the village community – struggle to reach children and engage them in their activities. As part of our work accompanying the school's transformation process, we organised a project week inviting local actors and institutions to participate actively in school life. This revealed pedagogical and organisational synergies that could later be integrated into the full-day offering.

The school thus becomes part of the community's social fabric. External activities are incorporated into the school – for example, music schools sharing school facilities – while learning and experiential opportunities also take place outside the building, such as through collaborations with local clubs, businesses, or charities. In this way, local knowledge, engagement, and human resources are woven into school life, an important response to the chronic resource shortages in education and, at the same time, a contribution to social cohesion.

3.3 Connecting schools with their surrounding open spaces

Thinking beyond tightly defined system boundaries also applies to outdoor areas. Many schoolyards and kindergarten play areas remain fenced off, unused after hours, during holidays, or at weekends, though they could be valuable community spaces. Conversely, some schools lack outdoor areas altogether. In both cases, it is important to view the surrounding environment as an interconnected open-space network, enabling children and young people to access safe and shared outdoor environments.

Various examples show that things can be done differently: in Denmark, schools in dense urban areas sometimes share public squares as play areas, without physical barriers. A school in Cologne, located in a park, takes a similar approach: simple signage indicates that certain areas are "primarily used for school activities", yet no fences restrict access – allowing others to use the space when possible. In Vienna, certain parts of education campuses are opened to the neighbourhood at specific times.

Such approaches require openness to change, new forms of shared responsibility, and above all, organisational adaptation. Many schools initially react with concern: What about safety? How can vandalism be prevented? How do we handle this openness?

This is where process-oriented guidance and careful listening are crucial: Where does the school currently stand? What is feasible? Which concerns are justified, and which can be addressed through clear communication, agreed rules, and shared responsibility?

Ultimately, the central insight is this: responsibility can only be assumed where participation is possible. When children and young people share spaces with others, they also learn to take care of them. Likewise, adults and other user groups learn to show consideration for children and young people. This mutual experience is more than a pedagogical side effect, it is a key foundation for democratic education and sustainable practice.

4 Space for Rethinking

4.1 Letting go of old habits to enable change

Many school buildings were erected with an understanding of education as a one-directional transfer of knowledge from teacher to learner. Yet the concept of schooling has changed: away from mere knowledge transmission towards holistic learning, teamwork, multi-professional collaboration, and practical application. Inclusion has become lived reality – pedagogically, organisationally, and spatially. Such learning and teaching demand a different, activating environment – an activity-based setting. Spaces must be differentiated: for concentration, movement, retreat, exchange, counselling, and therapy. They must be accessible and adaptable – not only architecturally but also socially. What is needed are multi-purpose, open yet clearly zoned learning environments that allow for small-scale, evolving change over time and in the interest of children. The expansion of full-day schooling and inclusion makes this transformation of school space and organisation even more urgent.

4.2 Rethinking and better using all available resources

Rethinking the school as a place of learning and living also means taking a step toward greater educational equity. This is an opportunity to create valuable offers accessible to all children, an opportunity that the school space development process should seize. For this purpose, all available and as-yet-undiscovered resources are analysed and made visible to develop new courses of action and expand the scope for all participants.

Existing structures form the starting point, both architecturally and organisationally. Each school's baseline is different. Only by uncovering the specific conditions of a school can targeted spatial, organisational, and pedagogical measures be identified. Which resources already exist? What works well, and what needs change?

4.3 Uncovering hidden potentials

A combined spatial and pedagogical analysis helps reveal weaknesses and potentials. To do this, we always need the input of the users, children, young people, and adults who use the building daily. Their perspectives expose what is needed to feel comfortable and to learn well (see Figure 13.7).

Figure 13.7: Observing how space is used reveals needs and potentials. Photo by nonconform.

We invite students and educators to show us their spaces, describe them, and allow us to observe everyday school life. At the same time, we introduce playful tasks to help them rediscover their strengths and spaces. For example, using a specially developed Quartet card game, children fill out categories such as "favourite place", "place to rest", "place to run wild", or "scary place". This makes their perception of the building visible. They reflect on spatial qualities – light, noise, comfort – and learn to recognise and articulate what makes a space work. In doing so, they identify both challenges and opportunities, discovering new synergies together with teachers. With older students, we use our *Patogo* app, which links analogue and digital space, for instance, by creating a collective "well-being map" of the school (see Figure 13.8).

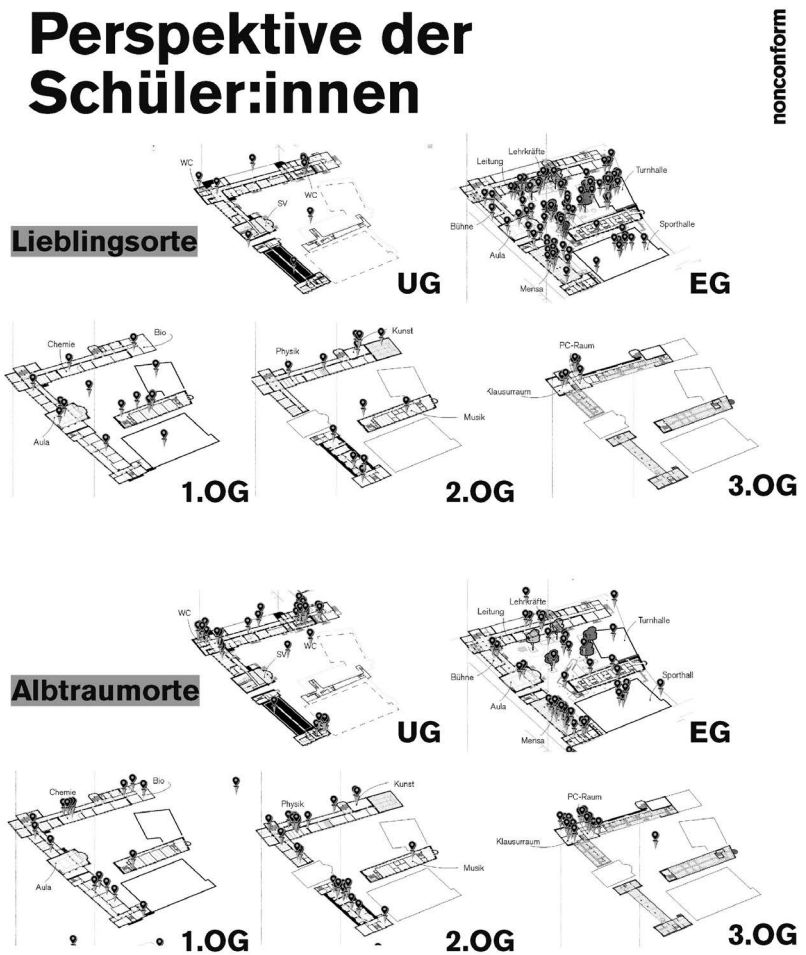


Figure 13.8: Students' perspectives: mapping favourite ("Lieblingsorte") and least favourite places ("Albtraumorte") in the school. Graphic by nonconform.

Such processes often reveal vast untapped potential in existing buildings – underused rooms, reclaimable corridors, and structural weak points that hinder contemporary educational practice, such as poor visibility for supervision, inadequate lighting, acoustics, or orientation.

And this is not limited to older buildings: even newly built schools often fail to reach their full potential. Modern facilities and furniture alone do not guarantee a good or future-ready school. Successful education requires more than open learning landscapes. What use is a new building if it is not used properly?

New concepts such as *Cluster- or Compartmentschulen* (cluster or compartment schools) hold great promise – but also challenges. Often, only the classrooms are put into operation, while shared spaces are perceived as burdens rather than opportunities. Teaching frequently reverts to old patterns, even when the space allows for new possibilities. Pedagogical and organisational adjustments fail to follow, due to time constraints, uncertainty, or lack of courage and communication.

Yet space can become the "third teacher" when pedagogy and architecture truly meet.

5 Space for Courage

5.1 Do, fail, learn, repeat

How, then, can spaces truly be appropriated so that they become genuine places for learning and living – whether old or new? How can school communities find the courage to explore new paths, experiment, and see mistakes as opportunities to learn?

Change provokes different reactions. Some in the teaching staff see it as a chance; others associate it with loss of control and uncertainty. To navigate these tensions, schools need safe environments for experimentation, development, and failure, embedded in everyday practice and in collaboration with students. Because: *Machen kommt von Machen* (doing comes from doing).

In our work with school communities, we strive to open up such spaces from the outset. Planning, refurbishment, and occupation processes are long, and neither buildings nor systems are ever perfect or finished. Waiting for perfection is futile. A learning space is never complete, it is always something to be appropriated, adapted, and redesigned. Learning itself is a process, and learning means making mistakes, learning from them, and trying again.

Therefore, the process can and should begin immediately – organisationally, pedagogically, and even through small spatial interventions. These so-called *Montagsmaßnahmen* ("Monday measures") are quick, tangible actions that accompany the larger vision: a reading corner under the stairs as a first retreat, a

willow tipi in the playground for shade, or a temporary student café in an otherwise unused kitchen. (See Figure 13.9.)

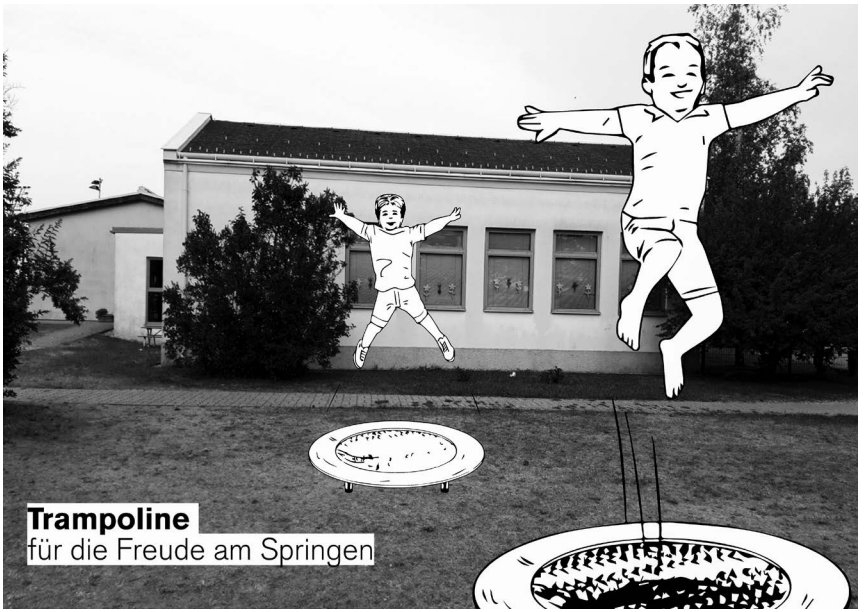


Figure 13.9: "Monday measures": small spatial interventions that immediately improve everyday school life. Photo/Graphic by nonconform.

5.2 Bold and needs-driven – children and young people's ideas

In spatial appropriation processes, children and young people play the leading role. They provide essential impulses for using spaces creatively and reveal how newly designed environments can enhance learning and strengthen their sense of agency. As facilitators, we encourage teachers to collaborate differently, for instance, in multi-professional teams or mixed-age groups, and to experiment with new methods that help rediscover and reinterpret spaces together. The connection between space and pedagogy is tested through various activities and learning formats. Children are actively involved in developing learning opportunities and in shaping spaces. Through conscious engagement with space design and use, new pedagogical goals can emerge, as well as jointly agreed rules for shared use. This works particularly well through new working groups, weekly project blocks, or entire project weeks where much can be tried, tested, and reflected upon directly. Our experience – both with primary and secondary schools – shows that students' empowerment often triggers the appropriation process, especially for shared areas.

5.3 Hands-on with the students

At a *Realschule* (secondary school) in Cologne (Germany), we organised a project week dividing students into teams to explore different aspects of their school and its spaces. The teams were mixed across classes and received step-by-step prompts for independent work, with teachers acting as supporters. The aim was less about producing concrete results and more about engaging in a collective process of rediscovering and reappropriating underused areas. Initially, both teachers and students were sceptical, yet they were positively surprised: students quickly took responsibility, organised themselves, and rediscovered their school. This playful, self-directed approach revealed both spatial and pedagogical potentials, even to the staff. The students' curiosity to explore previously neglected areas, such as the teaching kitchen and adjoining learning landscape, inspired teachers to integrate them more actively into everyday learning. At the same time, through participation and co-design, students developed essential skills and a sense of self-efficacy. (See Figure 13.10.)

Teachers, too, began adapting and reflecting – spatially, pedagogically, and organisationally – on what worked and what needed change.

Figure 13.10: Students exploring and reappropriating underused spaces during a project week. Photo by nonconform.

6 Space for a Shared “We”

6.1 Team building for the school community – within itself and with its building

A prerequisite for using spaces collectively is trust within the team and a shared sense of belonging. Many conflicts are not structural but communicative. Every school community therefore needs this organisational “we”, spatially anchored as a shared home, a place for encounter, exchange, and communication (see Figure 13.11).

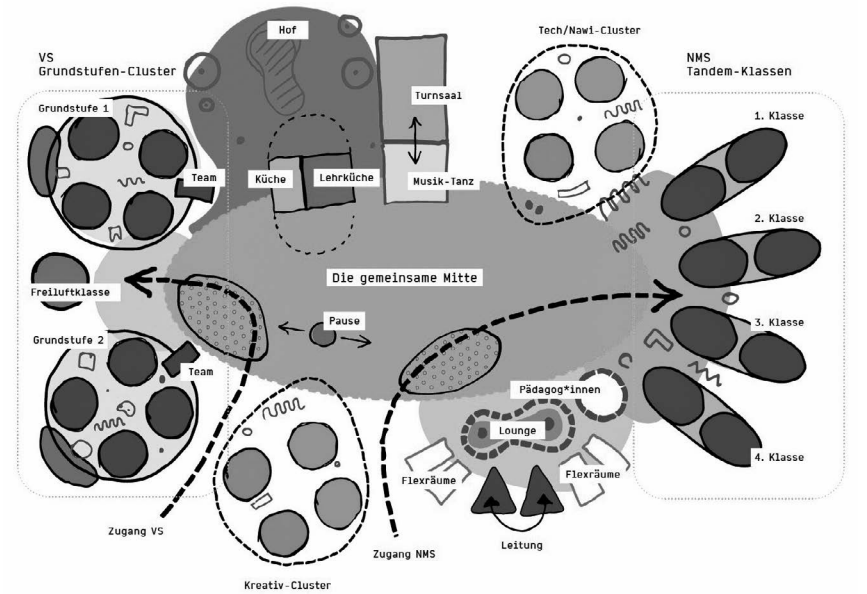


Figure 13.11: Spatial diagram illustrating shared spaces for encounter and communication within the school community. Graphic by nonconform.

6.2 Schools as shared flats (*WG*s)

Large educational institutions are comparable to a shared flat. And just as in a *WG*, there needs to be a place where people naturally meet, otherwise, it is mere coexistence, not cohabitation.

While small rooms may be appropriate for children’s groups within this *WG*, staff also need a space to gather as a full team and maintain a sense of the whole. Such areas are often neglected.

Requirements for team spaces are already high and seldom met: they must provide social areas, storage, and lively zones for exchange, but also quiet zones for focused work and meetings. Some spaces must be decentralised and close to activity; others benefit from being central yet deliberately separated, offering all adults a shared retreat, where spontaneous encounters between departments and institutions can occur, enabling informal dialogue beyond formal meetings.

In a *WG*, boundaries between private and shared spaces must also be clear. During our evaluation of seven *Bildungscampus* sites (educational campuses) in Vienna – whose spatial concept is based on shared "*Biber*" areas jointly used by kindergartens and primary or Compulsory Secondary Schools – we found that institutions have highly differing needs. In practice, due to different usage rhythms and noise levels, the planned overlaps often did not work as intended.

6.3 Spatial development is always linked with organisational development

A well-designed interface is crucial for facilitating cooperation and smooth transitions for children. Yet the greater the spatial overlap, the higher the potential for conflict; the clearer the zoning, the smoother the functioning. A good interface does not necessarily mean spatial overlap if usage needs differ – rather, clear allocations and differentiated zones for different age groups and requirements. What matters is regular communication between educators at the organisational level. If, like in a *WG*, I frequently meet my colleagues in the "kitchen", I am more likely to invite them to collaborate than if I am forced to share a single room and only own a corner of it.

Use must be organised, cultivated, learned, and practised. This requires time, space, and support. The community must grow together, develop a shared "why", and continuously keep that purpose in focus: why are we doing this, and what is our common goal? Equally, users and buildings must grow together. Missing facilitation during occupation and lack of attention to organisational matters – such as the absence of transparent room-booking systems – can prevent spontaneous use and waste potential.

7 Space for Appreciation

7.1 Architectural education begins in children's everyday life

Appreciation for space is central to school development, especially from the perspective of children. Spaces are not merely functional shells; they express values.

They reflect how we think about education, community, and responsibility for the future.

When children and young people feel that spaces are made for them – places where they feel safe, comfortable, and welcome – a special awareness develops. They gain a sense for design, responsibility, and for what constitutes a good space. They learn that spaces are not neutral but shaped by care, attention, and intention. Spaces can radiate trust and belonging, or insecurity and exclusion. If children grow up in buildings that tell them *"You are merely being stored here"*, they experience not a space of appreciation but one that prioritises function over atmosphere, quality of life, and relationship.

Such an attitude towards space – whether as a respectful learning environment or a mere storage facility – leaves its mark. It shapes not only individual experience but also one's worldview. And that influence endures. Those who, from an early age, experience that spaces matter, that they are cared for, thoughtfully designed, and valued, develop a lifelong sensitivity to architecture, urban design, and resource use. Architectural education begins where children and young people experience that space has meaning: that light, acoustics, materials, colours, furniture, and atmosphere have an effect; that architecture speaks a language, and that one can learn to understand it. (See Figure 13.12.)

That is why, in our processes, it is so important to involve children early, to show them what spatial design means, how spaces work, and how to take responsibility for them. Especially in relation to sustainability, resource conservation, and quality of life, this is a key aspect.

We see daily how our built environment is often hostile to life: streets unsafe for children, a lack of public gathering spaces, amenities accessible only by car. We accept these not because we approve of them, but because we have learned no alternative. What society tolerates depends greatly on what it has experienced. If we have never experienced spaces that are truly human – liveable, just, and accessible – we will not demand them.

Therefore, a sensitive approach to space is more than an architectural task, it is a cultural, social, and political one. A good school can play a vital role here: as a site of learning and experience for better building culture, social responsibility, sustainability, and democratic participation. By jointly and respectfully making better use of what already exists, we can save on construction, reduce sealed surfaces, create more outdoor space, save resources and operating costs, and thus create not emptiness, but vibrant places, richly used and collectively sustained.

Figure 13.12: Children engaging with architectural space through participatory model-making. Photo by nonconform.

A school redevelopment is not merely a construction measure. It is an invitation for the school community to rediscover itself, as a democratic, sustainable, and learning organism. When spaces are conceived, planned, used, and evolved together, what emerges is far more valuable than architecture: a school culture that endures.

Chapter 14 | Creating Supportive Learning Environments for Schools

Katharina Rosenberger

> *"When it comes to the future viability of a democratically organized school, democracy cannot stop at the planning and design of the school space."* (Schönig, 2013, p. 269)

1 Preface

The design of learning spaces in schools is closely related to prevailing views and theories about human beings, their thoughts and actions, and their interactions with others – in short, about the social. Learning spaces are a materialized expression of pedagogical orientations and their underlying anthropological understandings, of ideas about the organization of teaching and learning, and finally of (educational) political and bureaucratic regulations. For example, the way in which school buildings are planned and constructed, the way in which students are positioned in the classroom by means of seating and desks, or the learning and working materials they have at their disposal, reveal the way in which schools and teaching are thought about and conceptualized by scientists, architects and furniture designers, politicians, rarely by teachers, and even more rarely by students.

Because of the Cartesian and Kantian influence on Western thought, many models of action have long been individualistic and mentalistic. Accordingly, most pedagogical discourses – and ultimately pedagogical practice – were dominated by rationalist assumptions. Action and interaction between people were seen primarily as a mental phenomenon, as can be seen in the design of schoolrooms at the time (school construction and equipment) (Kemnitz & Jelich, 2003; Müller & Schneider, 2010). An example of this is the frontal and rigid orientation of the seats towards the teacher and the blackboard as the predominant form of spatial organization, and the corresponding architectural arrangement of the windows on the left-hand side in order to avoid casting an unfavourable shadow on the writing hand.

More recent approaches, however, argue against these assumptions that the knowledge and skills of actors are a practice-immanent, physical-material phenomenon. This reorientation, in the form of a stronger consideration of the social, bodily, material and spatial dimensions of human activity, means that human practices – and thus architectural spaces as well as artifacts – are given a decisive role as constituent elements. Since the "spatial turn", schools have been

understood as physical, social and symbolic spaces in which pedagogical orientations and practices are realized. Accordingly, actions and interactions – in our case, teaching and learning – must always be seen together with the framework that surrounds them and that sometimes decisively influences them (buildings, spatial and room arrangements, furnishings, technical equipment, everyday objects) (Latour, 2001, p. 247).

With an eye to the interrelationship between space and pedagogical practice, this article explores the conditions and possibilities of contemporary pedagogy and its spatial equivalent. The term "learning environments" encompasses both the classroom and the school space, aware that in recent concepts of school architecture this separation has been partially erased by alternative concepts ("from the narrow classroom to the partially open cluster", Seydel, 2012, p. 2).

2 Demands on a modern and sustainable school education

2.1 Objectives

There is currently a growing debate in many places about how schools should be or change, as recent societal developments (growing global inequalities, migration movements, digitalization and technologization, climate crisis, etc.) seem to have brought this institution to a point where a fundamental rethinking of traditional practices and setting the course for future developments is necessary (Robinson, 2015). The undisputed goal is high quality education. According to Bellmann (2019, p. 14), this includes qualification, socialization and subjectivation in equal measure: The qualification aspect (*first mission*) refers primarily to employability and further training skills that should be established through school education. There have been fundamental changes in this area in recent years. For example, due to technological progress, the half-life of vocational qualifications is now only a few years and will continue to decrease (Becker & Hecken, 2009, p. 357). In addition, many new job profiles are to be expected. This means that school education must focus on skills that will enable young people to successfully enter the still unknown and constantly changing world of work. In addition to digital literacy and (information) technology skills (specialized knowledge), key social, personal or action-related skills include soft skills such as collaboration and communication skills, resilience, flexibility and agility, as well as creativity, but also critical and analytical thinking.[1]

1 See labour market-related studies such as '21st Century Skills' (Stifterverband, 2021), 'Future Skills – Future Learning' (Kienbaum & Stepstone, 2021), 'Future of Jobs Report' (WEF 2023), 'OECD Learning Compass 2030' (OECD 2019). An interesting model in this context is the 'Future Skills Framework' (Stifterverband für die Deutsche Wissenschaft & McKinsey), which assigns 21 future skills to four different categories. In this model, it is

In addition to this aspect of economic necessity, the school also pursues goals that relate to the areas of socialization and subjectivation (*second mission*). Without going into the discourses behind these two core concepts in more detail at this point, it can be said that school socialization is about how students develop in confrontation with the secondary socialization instance "school" and thus adapt to society (Hummrich & Kramer, 2017). The concept of school subjectification focuses more on the dynamic negotiation process in which students actively deal with the positions assigned to them by normative orders and reconfigure them through self-positioning and discursive everyday practices (Geimer, Amling & Bosančič, 2019).

The personal development of students involves a variety of skills:

- „[…] cognitive and meta-cognitive skills, which include critical thinking, creative thinking, learning-to-learn and self-regulation,
- social and emotional skills, which include empathy, self-efficacy, responsibility and collaboration,
- practical and physical skills, which include using new information and communication technology devices" (OECD, 2019, p. 86)

The transfer of disciplinary and interdisciplinary knowledge and skills takes place in social contexts. Attitudes and values are inseparable elements of this process. The school must also provide an environment in which the health, resilience and well-being of all are promoted and learning is supported at many levels (Schönig, 2024, Chapter 5). It must contribute to promoting resilience and encouraging self-awareness as well as role identification. In terms of social learning and cultural transmission, school helps to develop interpersonal and communication skills (cooperation, participation, living together in a community or society, etc.). In exchanges and encounters with others, social norms, values and traditions are not only lived but also addressed in order to find and examine one's own position (values and basic attitudes, attitude to the world and to issues such as democracy, peace, non-violence, tolerance, justice, transculturality, sustainability, environmental awareness, etc.) in a reflective manner. "Knowledge, skills, attitudes and values are not competing concepts; they are developed interdependently. As schools, workplaces and communities become more ethnically, culturally and

noteworthy that although traditional skills (i. e. non-digital key competences such as problem-solving skills, creativity, entrepreneurship & initiative, intercultural communication, resilience) are seen as a basic building block for professional success, they are ranked behind the technological skills and general digital skills performed by tech specialists. Transformative skills (judgement, innovation skills, mission orientation, change skills, dialogue and conflict skills) are named as a new category that encompasses the skills required to meet societal challenges.

linguistically diverse, it will be more important than ever to emphasise the interrelatedness of knowledge, skills, attitudes and values" (OECD, 2019, p. 100).

In addition to the above-mentioned areas of education, the *third mission* of schools is to take on social responsibilities and tasks that go beyond the traditional remit of education and personal development. In their role as active shapers of society, schools should act as a focal point for community service in their communities and promote dialogue between schools and the world of work. They should use their educational programmes to promote and sensitize students to environmental and social issues in line with the Sustainable Development Goals[2]. Cultural education, the promotion of civic engagement and the teaching of values necessary for good coexistence in a pluralistic society based on tolerance and democracy are also important components of this orientation (see Global Citizenship Education[3] and Planetary Education[4]). In this sense, schools can make an important contribution to an inclusive society in which people take responsibility for the community and young people learn to do so.

2.2 Theoretical connections

Education in a complex world must realize different perspectives, which is expressed not least in the third mission mentioned above. In the spirit of "guiding dimensions", I would like to mention a few more at this point:

- *Inclusive education*: In many countries, there is a legal commitment to the equal participation of all students in the life of the school.[5] Diversity should therefore be seen as an enrichment for all concerned. (Diversity is understood here in a broad sense, not only referring to disabilities, but also to all categories of heterogeneity and including intersectional aspects). On the one hand, this means individualized support based on the needs and abilities of the individual (see Universal Design for Learning[6]), but also the opportunity to learn together (Wocken, 1998). Schools must be designed to be structurally accessible and to provide individualized attention to learners. This means, among other things: individual differentiation and retreat possibilities, the possibility to work in small groups, rooms for counseling and support services as well as for social and remedial education, psychologically and medically trained staff (Montag Stiftung, 2022, p. 10 f.).

2 https://sdgs.un.org/goals
3 https://www.unesco.at/en/education/global-citizenship-education
4 https://globaia.org/education
5 United Nations Convention on the Rights of Persons with Disabilities (https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-persons-disabilities)
6 https://udlguidelines.cast.org/

- *Capability approach*: This approach, developed by Amartya Sen and Martha Nussbaum, is concerned with how to organize the various resources available to people so that opportunities for fulfilment become real freedoms. It focuses on the concept of justice (which is also fundamental to education), assuming that the more opportunities its members have to realize their potential, the more just a society will be. The capability approach is therefore of interest not only in relation to general questions of quality of life, but also in relation to educational issues (Störtländer, 2019). The distinction between "capabilities" and "functionings" allows us to look beyond "educational outcomes". This raises the question of whether an individual had the freedom and opportunity to choose and achieve an action according to his or her own values. The approach points to the internal and external conditions through which the learner's potential can be transformed into real possibilities. The school must provide space for this.
- *Culturally sensitive pedagogy*: A pedagogy that strives for inclusion, social justice, and recognition of student heterogeneity must be culturally responsive. This means, among other things, that teachers are aware of their own cultural orientations and consider the extent to which these are reflected in their work with students. The WEIRD[7] concept (Henrich, Heine & Norenzayan, 2010) can be helpful here. It highlights the bias that underlies many studies when WEIRD individuals are mistakenly used as a generalizable standard for the entire population and cultural differences are ignored. For schooling, these trends highlight the limitations of a standardized pedagogical approach and emphasize the importance of taking cultural diversity into account in order to promote culturally responsive pedagogy and equity. Culturally responsive teaching can be well linked to the aforementioned Universal Design for Learning (Kieran & Anderson, 2019), but also requires appropriate spatial conditions.

3 The design of school space as a joint task of architecture and pedagogy

The realization that future school issues cannot be solved without taking space into account has led to a paradigm shift in school construction (Jäger-Klein & Plakolm-Forsthuber, 2012; Imhäuser, 2016; Hammerer & Rosenberger, 2020). One example of this is the unprecedented interaction between pedagogy and architecture, for example when innovative solutions are developed through participatory processes in the context of school renovation and new construction. For such school construction projects, a preparation and development phase ("planning phase zero") is planned, in which the essential foundations for an efficient school

7 Western, Educated, Industrialized, Rich, Democratic

building are worked out. The aim is to develop a sustainable pedagogical and spatial concept that ensures the efficiency, needs-based nature and sustainability of the building project (Montag Stiftung, 2014, p. 51). It is therefore advisable for every school to use the prospect of a school renovation, conversion or new building as a window for co-design. Many school building projects have found it useful to involve external school building advisory teams consisting of architects and teachers in this preparation and development phase, or to have them lead the process.

The focus of the preparation and development phase is the creation of an educational and spatial concept, in which the physical structures are harmonized with current and future requirements for learning and teaching, living together, working in teams, and networking the educational institution with the local community and cultural institutions. During this process, the school's mission statement and educational concept are usually refined and developed, which is then reflected in the structural possibilities. Exploring the possibilities and limitations of the existing building is particularly important in the case of a conversion (Montag Stiftung, 2012, p. 156 f.). The following questions, among others, are discussed in workshops with school management, staff, students, parents, administrators and sometimes school inspectors:

- What kind of spaces are needed for a pedagogy based on moving between different learning environments?
- What does it mean to assume all-day schooling for the future?
- How can the school be organized not only as a place of learning but also as a place of living?
- What are the implications of changing team structures, e. g. in the context of an inclusive school?

At the beginning of "planning phase zero", the focus is on reviewing or further developing the educational concept and the associated definition of utilization scenarios. As the process progresses, the focus shifts more and more to spatial planning. Here, all parties involved (school, administration, politics, architecture) must be involved with their requirements for the joint project. It is important that everyone is willing to engage in the discourse and to work closely together to find a good, sustainable solution for the joint building project.

4 Spatial qualities and spatial organisation

4.1 Claims

How should educational spaces be designed to prepare young people for the multiple goals mentioned in Section 2? The following theses (Seydel, 2023,

Chapter 1.2; see also Seydel, 2012, p. 2 f.; Montag Stiftung, 2017, p. 52 ff.) are crucial for school buildings and should be taken into account when redesigning and reconstructing school spaces as well as in the further development of current school building guidelines:

1. Learning requires basic physical conditions.
2. Learning needs security.
3. Learning needs a stimulating and favorable environment.
4. Learning needs relationships.
5. Learning needs active approaches and multiple perspectives.
6. Learning needs varied use of different instructional formats.
7. Learning needs a balance of rest and movement.
8. Learning needs more than computers in the age of the "digital revolution".
9. Drama and dance, singing and design, painting and music provide the basis for cultural education and open avenues for personal development.
10. Amazement and curiosity are the basis of scientific and technical education; experimentation anchors the understanding of theoretical concepts.
11. The school is a role model and project area in the careful handling of nature and technology.
12. The democratic state needs a democratic school: democracy must be practiced in order to be understood.
13. The school opens itself to the city. The city opens itself to the school.
14. The all-day school is not only a place of learning, but also a place of living.
15. In inclusive schools, no one is excluded.
16. Teachers do not work as "lone fighters" but as part of a multi-professional team.
17. School is never finished.

These guidelines need to be translated into spatial qualities. Concrete considerations can be found in several publications (e. g. Dreier et al., 1999; OECD, 2006; Montag Foundation, 2017, 2022; Seydel, 2023). Particularly important are the spatial aspects that have a direct impact on the needs and activities of the actors (movement and placement, communication and cooperation, teaching and learning etc.), such as how much space is available for what and for whom, what are the proportions of the respective spaces, what are the visual and auditory relationships between the places, what pathways have been created, whether outdoor spaces are also made accessible, etc. The possibility of flexible use of space also plays a role. In addition to these functional qualities, physiological aspects are also important, including lighting and air quality, acoustics and temperature, the environmental compatibility of materials, and the presence of plants (and animals). Much is closely related to aesthetic criteria, which are important design criteria through the choice of colors and materials, surface textures, furniture design, etc. They are central to the emotional impact of a space, i. e. how attractive

and pleasant a space is perceived and experienced by users. In addition to other aspects such as safety, technology and sustainability, or the choice of location for the school and its relationship to its surroundings, the issue of having a say in the design of the space (participation, appropriation processes) should not be neglected (Rosenberger, 2023).

The first aspect mentioned, that of spatial organization, will now be discussed in more detail by way of example.

4.2 Models

Not least due to the increase in all-day educational facilities, the establishment of inclusion and digitalization in the school system, and further developments in the sense of a "new learning culture", new spatial concepts for learning spaces have emerged in school construction in German-speaking countries in recent years, which should help to overcome the aforementioned challenges (see also international studies such as Imms et al., 2017; Imms & Mahat, 2021; Dovey & Fisher, 2014). They can essentially be categorized as follows (see also Seydel, 2014, p. 43; Montag Stiftung, 2022, p. 22 ff.):

- *Classroom plus*: This concept aims to create new pedagogical spaces by extending the conventional classroom and/or adding an adjoining or intermediate group room that can be used by both classes (individually or together) (Seydel, 2023, p. 173 ff.). Ideally, the rooms (especially the extension room) are designed with variable furnishings that allow for flexible room organization and differentiated instruction. Different learning activities such as collaborative work, personalized learning, supported learning in small groups, etc. should be possible in the common space, but also retreat zones should be considered. Viewing windows on doors or walls facilitate parallel use of rooms by allowing teachers to see directly. The corridor area should also be used for pedagogical work whenever possible (although in practice there may be restrictions due to fire codes). A sophisticated solution to the classroom-plus concept is flexible interior walls that allow the rooms to be easily combined into a larger learning and teaching area when needed.
- *Cluster*: This is currently the most frequently realized room type in new school buildings in Austria.[8] The idea of creating small, manageable socio-spatial units is not new to school construction. In the United States, the concept was

8 In Vienna, for example, eleven campus models, in which clusters function as organisational units, were implemented between 2012 and 2023 as part of the first Vienna Educational Institutions New Building Programme. Nine new campuses will be created in the follow-up project (until 2034).

implemented in the 1950s under the term "cluster plan school". In England and Scandinavia, this form has been established for years (Binder, 2015, p. 7). The basic principle of the cluster solution is that rooms are not designed to be monofunctional. This means that a space is not limited to a single function, but a continuum of interrelated learning and experience spaces is created around a common center. The space also offers users different atmospheres. The arrangement of spatial functions complements each other and together forms a perceptible unit. Specifically, this usually involves a combination of several classrooms (typically three to six), visible group rooms, flexible access areas, a cloakroom, sanitary facilities, various common areas (e. g. "marketplace" or "learning island", conservatory, terrace or open-air classrooms, window recesses), as well as a team room for teachers and storage rooms. The visual relationships between the rooms contribute to the unity of the design and facilitate the separation of groups during lessons, while at the same time providing acoustic separation. A cluster is a "small school" within the "big school". All clusters are connected to common areas such as the entrance, administration and staff rooms, gym, music and work rooms, dining area (canteen/buffet, kitchen), garden etc.

- *(Open) Learning landscape*: This concept of maximum openness was experimented with in Anglo-American countries in the 1950s and 1960s under the name of "open classroom" or "open plan" schools, before social developments in the 1970s led to a return to traditional spatial concepts. In the 1990s, however, the emphasis on individualized learning brought this type of spatial organization back into focus (Cuban, 2004). In open space concepts, there is no monocausal allocation of functions to rooms and, in this sense, no classrooms. Instead, they are characterized by a large open learning area (open-plan space) that can be used by several class groups simultaneously for different learning situations. This is combined with organized and demarcated zones for smaller groups, concentrated work ("think tanks") as well as instruction and input phases. Good acoustic separation and visual connection through glass walls are important here. Access areas are used as much as possible as a spatial resource. This means that there are no conventional corridors. Furniture is ideally easy to move and can be used in a variety of ways (e. g., shelving with casters, mobile individual tables). Carpets and various types of cushions can also be provided for working close to the floor. There is a direct line of sight between all areas.

Visual connections play a key role in all three models. However, there is little research on the optimal balance between openness and enclosure. The "trend towards transparent classrooms" (Forster, 2015, p. 27), which can be seen in many new school buildings, needs further research. In practice, teachers report that too much openness and transparency can lead to stress and aggression or

withdrawal, for example, if children are exposed to an overabundance of (social) signals throughout the day and have little „back-up" from the room (ibid., p. 26). Schools are not only places of learning but also places of living. The many forms of activities that take place during the day require appropriate spaces that need to be considered in the planning stage. In this context, Schönig (2024, ch. 7) mentions the antinomies of activity and movement vs. rest and relaxation, being together vs. withdrawing and being alone, individual playing and learning vs. collective playing and learning, learning with digital media vs. experiencing nature and healthy eating, and working vs. celebrating. It is important to satisfy everyone's sense of privacy. Such "private spaces" (niches, corners, retreats) increase the willingness to communicate as well as the sense of well-being and satisfaction with the space. Children (as well as the adults who work in a school) also need places in a school where they can sometimes be undisturbed by the rest of what is going on. "The roots lie in the human need to look out and to retreat into a safe space" (Forster, 2015, p. 26).

5 Summary

Learning in heterogeneous, inclusive groups, as well as full-day care, requires appropriate spatial arrangements and structures that allow for different forms of learning and exchange, while at the same time accommodating the need for retreat, relaxation, or movement. If learning is understood as "an active, self-directed process that builds on existing experiences, takes place individually and in social relationships and is influenced by emotions and other situational circumstances" (Speck-Hamdan, 2012, p. 251), special attention must be paid to a learning environment that also supports active appropriation of the world in terms of space and atmosphere.

In recent years, there have been a number of new and evolving developments in school construction that affect both the school architecture itself and the design and construction process. While the former often includes the networking of different institutions (e. g. kindergarten and school), the consideration of local conditions, the possibility of a wide range of educational offers and individualized learning processes, homely recreation areas and individual retreat areas, opportunities for cross-group and cross-age collaboration, the provision of flexible furniture and digital learning media, the inclusion of outdoor spaces etc., the latter also includes the design and construction processes. In the case of the latter, there are increasing efforts to involve future users in the planning process for school conversions, renovations, or new construction to ensure that architects and school administrators develop a space program that is tailored to the actual needs of the site.

The greatest challenge facing the education system today seems to be that, due to the increasingly rapid pace of social and media development, schools can no longer count on the consistency they could have expected in past decades and centuries. Schools increasingly have to deal with many uncertainties and imponderables, even though their basic "missions" remain the same. The question of which forms of spatial design best support the educational processes of learners and the pedagogical programs of teachers is not insignificant. The goals, guidelines, and concepts outlined in this article show how the different levels can be taken into account.

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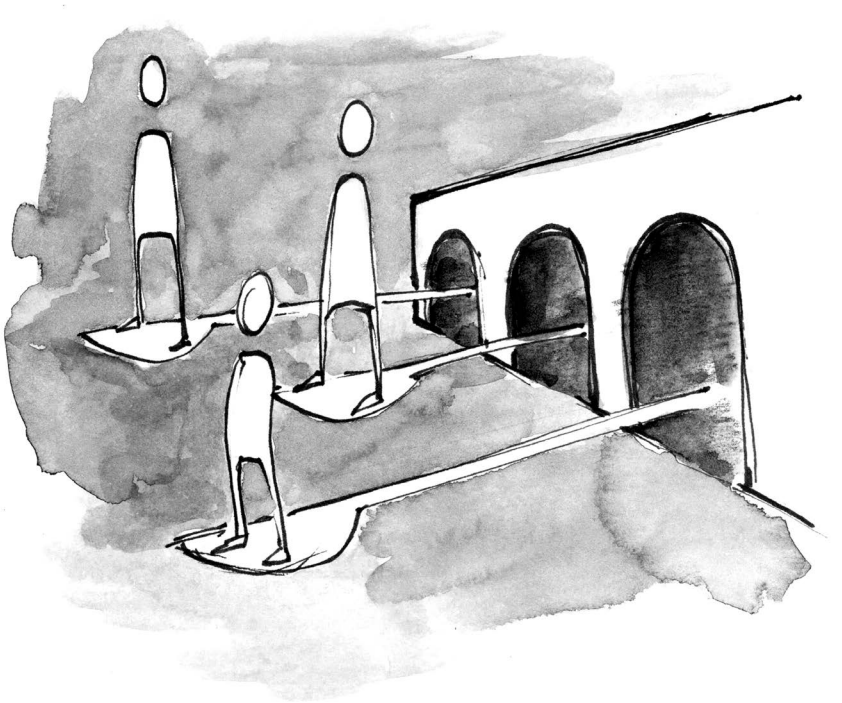
Closing Reflection | Key Insights and Pathways Forward



Drawing by Stefanie Egger

Chapter 15 | Summary of Key Insights and Pathways to a More Participatory Education

Reinhard Bauer & Sabine Zauchner

Across the contributions in *Liberating Voices in School*, a shared understanding has emerged: education becomes transformative when learners are recognized as active participants in shaping it. The chapters in this volume reveal that "liberating voices" is not a metaphor but a practical framework for reimagining how schools function as communities of learning, collaboration, and civic engagement.

One key insight concerns the interplay between voice and agency. Giving students a voice is only the beginning; what truly empowers them is the opportunity to *act* on what they express. Several contributions show that agency develops through meaningful tasks, shared decision-making, and visible impact. Voice becomes transformative when it is linked to responsibility and when learners experience that their ideas matter.

A second insight relates to the structures that sustain participation. Empowerment cannot rely on individual enthusiasm alone. It requires systemic support, curricular flexibility, inclusive pedagogies, and environments that encourage experimentation. When participation is embedded in the organizational and spatial design of schools, it moves from exceptional to everyday practice.

Yet participation cannot be truly inclusive unless it explicitly addresses the voices that are systematically marginalized. As Sabine Albert outlines in *Inclusive Education as a Prerequisite for Participation* (see Part 2 in this volume), empowering all learners requires more than general openness, it demands a deep structural and cultural shift that recognizes diversity not as a challenge, but as a normative foundation of democratic schooling.

Drawing on frameworks such as the Capability Approach, Albert shows that real participation depends on developing learners' capabilities, their freedom and actual opportunities to act, decide, and contribute meaningfully. Formal access to education is insufficient unless accompanied by empowerment strategies that support self-efficacy, respect diversity, and dismantle barriers. Central to this are inclusive pedagogies, dialogical learning spaces, professional attitudes rooted in human dignity, and the creation of learning environments that value co-creation and self-determination.

Albert's work reinforces a key message from this volume: participation is not a privilege but a right, and it must be designed, practiced, and structurally enabled. Without inclusive foundations, the liberating of voices risks becoming selective and exclusive, amplifying some while silencing others.

This inclusive approach not only benefits marginalized learners but also transforms teaching cultures more broadly. In participatory classrooms where every student's voice matters, educators rediscover their own agency through collaboration, reflection, and shared responsibility.

Third, the chapters demonstrate that empowering students also transforms teachers and institutions. In participatory learning cultures, educators become facilitators and co-learners, rediscovering their own agency within collaborative processes. This shift demands professional courage and a rethinking of authority, but it also leads to deeper trust, mutual respect, and shared learning.

A fourth insight concerns the democratic dimension of education. Participation and democracy are inseparable: learning itself becomes a democratic act when students deliberate, negotiate, and make collective decisions. The contributions in this volume show that democratic education is not an abstract ideal but a lived experience that must be practiced daily, in classrooms, staff rooms, and communities.

Finally, the volume highlights the importance of design and environment. Space is not neutral; it shapes how people relate, communicate, and learn. Schools designed for flexibility, openness, and interaction embody the same principles that participatory pedagogy promotes. Physical and social architecture thus become expressions of democratic learning cultures.

These insights gain additional meaning when viewed against what happens when voice is *not* liberated. In *Chagrin d'école* (*School Blues*), Daniel Pennac (2007) reflects on his own experience as a failing student and the pain of being unseen and unheard. His book exposes the invisible injuries of schooling, the humiliation, fear, and withdrawal that occur when learners' perspectives are ignored. Pennac reminds us that educational transformation begins with listening: every student's story holds the potential for growth when met with empathy rather than judgment.

Looking at the structural level, Herzog (2013) traces the enduring *metaphor of school as factory*, a concept that emerged in the United States in the mid-nineteenth century and continues to shape global educational discourse. The "factory model" of schooling, with its focus on efficiency, uniformity, and control, still underlies many reform debates today. Against this background, the approaches presented in *Liberating Voices in School* can be seen as counter-movements, attempts to replace standardization with dialogue, routine with creativity, and compliance with participation.

Building on this, Philippe Wampfler (2024) argues in *L'école, c'est moi: Schüler:innen im Zentrum zeitgemäßen Unterrichts* that contemporary schooling must radically reposition learners at the center of the educational process. For Wampfler, digital culture has reshaped knowledge production, demanding pedagogies that emphasize autonomy, feedback, and co-creation. His call resonates with the approaches presented in this volume: enabling students not merely to consume information but to shape meaning, context, and value.

This orientation also aligns with the broader call for developing "future skills" – capabilities such as critical thinking, collaboration, creativity, and adaptive learning – that prepare learners not only for a digital economy but also for democratic participation and ecological responsibility. The practices shared in this volume (see Part III in this volume) demonstrate that such skills are not abstract ideals, but can be cultivated through participatory structures, real-world projects, and reflective pedagogies.

Complementing this perspective, Christoph Städeli (2023) introduces the framework of *Positive Education* through the model of *PERMA Teaching*, grounded in Seligman's (2011) psychology of well-being. Städeli argues that education should not only convey knowledge but also cultivate positive emotion, engagement, relationships, meaning, and accomplishment – the five dimensions of flourishing. Empowerment and participation, as shown in the contributions to *Liberating Voices in School*, align precisely with this understanding: they strengthen well-being, resilience, and motivation, enabling both students and teachers to experience success as shared growth.

Taken together, these insights point toward a vision of education as a *shared, enabling ecosystem*, one that empowers all its members to learn, act, and shape the world collaboratively. The experiences presented in *Liberating Voices in School* suggest that transformation does not necessarily begin with policy reform or large-scale interventions. It begins locally, in classrooms and in projects in projects like *StAct – Start and Act*, *Recycling Heroes*, or *voXmi* (see Part IV in this volume) where people listen to one another and act together.

These initiatives exemplify what is often described as Service-Learning a pedagogy that integrates meaningful community engagement with curriculum-based learning objectives. When students contribute to solving real-world problems, they not only deepen their understanding of academic content, but also develop civic awareness, empathy, and a sense of agency. Service-Learning becomes a living context for future skills and democratic competencies to grow together.

The challenge for educators, researchers, and policymakers is to nurture these beginnings and build networks of practice that connect them. If this book contributes to that dialogue – encouraging reflection, experimentation, and courage in educational practice – then its purpose has been fulfilled.

A compelling real-world example of such localized transformation is the *Modulare Mittelschule Aspern* in Vienna, under the leadership of Doris Pfingstner (see Part I in this volume). There, student participation is not treated as a project or isolated practice, but as an embedded and ongoing part of everyday school life. Students co-decide, teachers act as facilitators, and structures are intentionally designed to support dialogue, autonomy, and mutual trust. This cultural shift was not the result of a formal strategic plan imposed from above. Rather, it emerged

organically from a shared willingness to question inherited norms, rethink roles, and co-create a school culture that lives the values it teaches.

This perspective gains further depth when placed in conversation with broader debates on mindset and cultural change in education. As Guley and Reznik (2019) argue in *Culture Eats Strategy for Breakfast and Transformation for Lunch*, transformation fails not because of bad intentions but because of deeply embedded belief systems. Culture, like a flywheel, stabilizes but also resists. In schools, this means that even the most well-intentioned reforms will struggle unless the mindset of the system shifts from control to trust, from compliance to collaboration.

A compelling parable that mirrors this shift is David Hutchens' *Outlearning the Wolves* (1998). In this fable, a flock of sheep lives under the constant threat of wolves. Their initial strategies – tighter fences, stricter rules, more vigilance – fail. The breakthrough begins when one sheep asks new questions: What if the way we see ourselves is part of the problem? This curiosity sparks a collective process in which the sheep begin to reflect, experiment, and listen differently. Over five stages, they move from inherited fear to shared responsibility, from passive survival to creative adaptation. The wolves remain but the sheep are no longer powerless. They have outlearned them.

This shift unfolds over five stages: First, the sheep begin to question long-held beliefs – about themselves, the wolves, and what safety means. Next, they start listening to overlooked members of the flock, those with different memories and perspectives. Gradually, they try new behaviors: paying closer attention, moving with purpose, and sharing responsibility. As trust grows, the community becomes more open and communicative, strengthening its collective awareness. In the final stage, they realize that their most powerful asset is not physical defense, but their ability to reflect, adapt, and act together.

For schools, this story is not merely metaphorical. It reflects the reality that transformation comes not from more control, but from learning communities that are willing to question their assumptions, embrace uncertainty, and foster collective agency. Creativity plays a central role in this transformation. It is not a luxury or an extracurricular bonus, it is the engine of cultural change. Creativity embraces ambiguity, invites multiple perspectives, and allows space for play, experimentation, and failure. When schools become places of creative inquiry, they invite not just new content, but new ways of thinking, for students as well as for teachers and principals.

From this vantage point, *Liberating Voices in School* is not just a collection of case studies. It is part of a larger cultural project: to reimagine schools as democratic ecosystems rooted in trust, creativity, and shared responsibility. If this book contributes to that shift by connecting patterns, inspiring courage, and encouraging reflection then it has done what it set out to do.

From Patterns to Practice: Closing the Loop

Douglas Schuler's *Liberating Voices: A Pattern Language for Communication Revolution* (2008) provided the conceptual spark for this volume, and it also offers a fitting framework for its conclusion. Schuler's notion of a *pattern language* – a collection of interrelated ideas that guide collaborative action – invites us to see the educational practices presented here as part of a broader system of social design.

Many of the approaches explored throughout this book reflect patterns that Schuler identified: *Voices of the Unheard* through inclusive pedagogy, *Community Inquiry* through collaborative research, *The Power of Story* in narrative learning, *Meaningful Map* in reflective practices, and *Appropriating Technology* in digital participation. These are not isolated techniques but interconnected principles that make education more participatory, humane, and democratic.

Revisiting Schuler's framework at this point brings the book full circle. The work of liberating voices is, ultimately, the work of cultivating a living pattern language for education, one that can evolve with each classroom, school, and community that engages with it. *Liberating Voices in School* therefore concludes not with a final statement, but with an open invitation: to continue naming, sharing, and refining the patterns that allow education to become an act of collective empowerment. We must not wait until culture eats strategy for breakfast. If we want transformation, we need to start with culture by shaping the mindsets, relationships, and daily practices that make liberating voices not just a vision, but a lived reality.

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Biographical Notes on Contributors

Albert, Sabine, Dr., is a Professor of Vocational Education with a specialization in diversity and serves as Head of the Department of Urban Diversity Education at the University College of Teacher Education Vienna. Her academic work centers on inclusive teaching and learning as well as on the social and cultural dynamics of contemporary society. Her research focuses on innovative educational approaches that foster participation, equal opportunities, and diversity. With an interdisciplinary perspective, she bridges theory and practice to design educational environments that value diversity as a strength and enable future-oriented learning.

Bauer, Reinhard, Dr., is an expert in instructional design and educational technologies. He is a Professor of Instructional Sciences at the University College of Teacher Education Vienna, where he also heads the Department of Secondary Vocational Education. Previously, he worked as a research associate at the Department for Interactive Media and Educational Technologies at the Danube University Krems. His research interests include educational patterns, e-education, social video learning, and innovative didactics using digital media. As a visiting professor and visiting scholar, he has held positions at the Universidad Nacional Autónoma de México (UNAM, Mexico City), the University of New Mexico (UNM, Albuquerque), and the School of Education at Kathmandu University (KUSoEd, Lalitpur, Nepal).

Egger, Stefanie, Dr., studied Industrial Design. The following years of practical experience sparked her curiosity about forms of design knowledge that are not taught in design school, this led to a PhD in Science, Technology & Society Studies. Her dissertation on tacit knowledge in the design process later became the foundation for her book *"Stummes Wissen"* ("Tacit Knowledge"), published as part of the BIRD series. Bridging research and practical design work is a central concern for her and has found expression at the Invisible Lab since 2020.

Jäggle, Georg, Dr., is a Professor for Technology Literacy at the University College of Teacher Education Vienna. His research focuses on educational robotics, technological literacy, and the role of self-efficacy and attitudes toward innovative technologies such as AI and robotics. He explores how people and organizations can be prepared for technological transformation and how citizen science and participatory approaches can engage society in shaping future technologies. His work combines educational innovation, technology ethics, diversity, sustainability, engineering education, vocational education, and the development of new learning spaces and qualification concepts in STEM education.

Knapp, Rob is Emeritus Professor of Physics and Sustainable Design at Evergreen State College in Olympia, Washington. His background is that of the long-time reflective practitioner more than the arm's-length researcher. He trained in physics at Harvard and Oxford Universities (D. Phil., 1968), felt a powerful call to work with undergraduates, and found his way in 1972 to Evergreen, then just one year old. Launched with a commitment to thorough rethinking of undergraduate education, it has become a very unusual institution. He was part of its intense formative years and continued there, including two periods as academic dean, until retiring in 2016. Among the college offerings is a great emphasis on "learning communities," a team-taught, full-time mode of education thoroughly committed to interdisciplinary study, collaborative learning, and linking theory with practical application. Faculty have great freedom to design, implement, and modify learning communities, and are evaluated on their results. In this environment, his subject matter became interdisciplinary, building out from his original base in physics with the help of learning community teammates. Since 1999 he has worked primarily on sustainable design, especially of buildings, with their necessary mix of physical science, civil and mechanical engineering, economics, visual design, group dynamics and government regulation. He founded a recurring Evergreen learning community on sustainable design; led the on-campus effort for sustainability in a major new classroom building and held senior internships with two Seattle design firms to gain exposure to design processes in real-world architecture. Among his main teaching responsibilities was advising and assisting all phases of student-led work. Projects shaped and conducted by students, both on and off campus, are frequent components of learning communities. There is also considerable opportunity at Evergreen for individually designed studies lasting up to a year, on student-generated plans that a faculty member agrees to support. Because of the great variety of student experiences that unfold in this system, written evaluation is the norm, not grades or scores. This applies to both students and faculty. Each person writes self-evaluations and receives evaluations from those he or she has worked with. For students, these count toward their graduation; for faculty they count toward retention, because teaching quality, not research production, is the criterion for employment. (His first book, a study of sustainable building, was published after he retired.) At an even larger scale, Evergreen students decide the shape of their four years of study. There are no pre-defined majors or minors. Faculty set prerequisites and define activities within each offering but students decide which combination of offerings will make up their Bachelor's degree. Evergreen is truly a place which generates and fosters participatory, inclusive, and transformative learning environments, the focus of this book.

Laven, Rolf, Dr., is an artist, researcher, and a Professor of Art and Design Didactics at the University College of Teacher Education Vienna, and lecturer at the Academy of Fine Arts and the University of Applied Arts Vienna. Trained in sculpture in Maastricht and Vienna, he earned his Ph. D. on Franz Čižek and Viennese art education. His research and teaching focus on socially engaged art, community-based learning, and interdisciplinary collaboration. He has coordinated several EU-funded research projects in Service-Learning, visual

competency, dramapedagogic, art & education and is currently co-developing a STE[A+]M doctoral consortium with TU Wien linking art, design, technology, and the natural sciences. For more information, see https://www.researchgate.net/profile/Rolf-Laven-2 and https://orcid.org/my-orcid?orcid=0000-0002-9907-7838.

Lepenik, Christian studied Information Design and began programming his first websites even before starting his studies. Now a successful entrepreneur, he founded his own design studio in 2011 to explore new frontiers of design at the intersection of strategy, brand development, service, and interaction design. In 2020, this evolved into the Invisible Lab.

Maurič, Ursula, Dr., is a teacher educator and researcher at the University College of Teacher Education Vienna in the Department of Urban Diversity Education. Her research focuses on global citizenship education and multilingualism in migration societies. She is particularly interested in the conclusions that can be drawn from this for inclusive university teaching methods, in addition to school development. Her doctoral thesis on global citizenship education in teacher education and the potential for democracy education in the early stages of a career forms the basis for her contribution and was published as a book in 2024. She is the federal coordinator of the voXmi educational network.

Nelson, Lin, is a retired teacher, having taught for 25 years at the Evergreen State College in Olympia, WA. Her focus has been on community studies, social movements, public health and the environment. She continues to be in the advisory circle for the college's Center for Community-Based Learning and Action. A key element in her teaching has been work with students' group projects on community-based participatory research. Before Evergreen, she taught at Ithaca College and Cornell University in NYS. A foundational element in her learning and public involvement was her work as a staff member of the Central NY Council on Occupational Safety and Health, which involved labor-based efforts on community strategies linking workers, public health advocates, medical providers and the regional environmental movement. Now retired, she's involved in labor, health and environmental justice advocacy.

***nonconform* – think further, use better, build less –** that's **Katharina Forster, Maria Isabettini and Caren Ohrhallinger**

Nonconform plans differently. The nonconform Building Reduction Planning turns conventional planning logic upside down: existing spaces are reorganized for the future, vacancies are reactivated, uses are combined, and new synergies are created. In times of tight budgets, endless wish lists, and growing scarcity of resources, needs are refined together, and space is effectively developed with minimal land use. This approach leads to forward-thinking solutions for schools that put a caring environment for children at the center as well as for neighborhoods, town and city centers, public institutions, and businesses – with less built volume and more quality of life. True to the motto: "*We build less and get more.*" With its interdisciplinary team at eight locations across Germany and Austria,

nonconform draws on 25 years of experience in co-creative development processes with users and decision-makers. The result: tailor-made projects that provide exactly what is truly needed – spatially, socially, ecologically, and economically.

Pfiffner, Manfred, Dr. habil., is a Professor of Vocational Pedagogy at the Zurich University of Teacher Education and a Professor of Didactics and Artificial Intelligence at the *Idea_Lab* of the University of Graz. Following several teacher training qualifications and extensive teaching experience at vocational schools, he studied educational psychology, media and communication studies, as well as social work and social policy at the University of Fribourg. He earned his doctorate at the University of Oldenburg; this was followed by his habilitation and the award of the venia legendi in educational science with a focus on school education. His research focuses on the didactics of vocational education, curriculum development, educational assessment, and the challenges of competence-oriented learning within the framework of the 4 C model.

Pfingstner, Doris has led Vienna's *Modulare Mittelstufe Aspern* as principal since April 2009, transforming it from a struggling suburban school into an award winning model of innovation. A trained teacher in German and Arts, she added a marketing degree and gained international management experience in the UK before returning to Austria. Under her leadership, the school created a modular learning system, strengthened staff development, and earned the 2023 State Prize for innovative schools. She advises Teach for Austria, *Wirtschaftsbildung* foundation, KURIER's education board and she is involved in various projects led by the Ministry of Education and the OECD.

Rosenberger, Katharina, Dr. habil., is a Professor at the University College of Teacher Education Vienna/Lower Austria; professional career: approximately 20 years as a special needs teacher in Vienna (primarily in the field of inclusive education), teaching qualification for special schools, primary schools, speech pedagogics and physical disability education; completed doctoral studies (interdisciplinary philosophy/pedagogy) at the University of Vienna; venia docendi for the subject 'School pedagogy with special consideration of teaching theory' at the University of Innsbruck; main areas of work and research: Practical theoretical school and teaching research (especially on the topics of 'school and space' and 'diversity'), teacher training and pedagogical professionalism, acting in uncertainty, methods and methodology of qualitative social research.

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Schuler, Douglas has been exploring and cultivating civic intelligence for nearly forty years. He holds master's degrees in Software Engineering and in Computer Science and has written several articles and books, including Participatory Design, New Community Networks, and Liberating Voices. He is a former chair of Computer Professionals for Social Responsibility and of the Association for Computing Machinery's Special Interest Group on Computers and Society. Doug worked at Boeing Computer Services for sixteen years on collaborative systems and AI before joining Evergreen. During his twenty-one years at Evergreen, he taught programs related to software engineering, computers and society, and civic intelligence – often in collaboration with colleagues from other fields such as geography, public health, philosophy, library science, and folklore studies. Now retired, he continues to work on several projects. Although his work has taken many forms, it always comes back to education, which he believes holds the key to the future.

Sterel, Saskia, Dr. phil., is lecturer in subject didactics at the Zurich University of Teacher Education, teaches general education at the Winterthur Vocational School and spent several years as a trainee teacher for prospective vocational schoolteachers in general education. Together with Prof. Dr. habil. Manfred Pfiffner, she developed the 4 K model: a degree programme in which prospective teachers are trained jointly for 'vocational education', 'higher technical colleges' and 'general education'

Tankır, Mehmet Fatih is a teacher and education researcher based in Vienna. He teaches at the Compulsory Secondary School of the University College of Teacher Education Vienna, where he also offers seminars on diversity in everyday school life. As a *voXmi* coordinator and member of the Department for Urban Diversity Education, he promotes inclusive and linguistically responsive learning environments in which students' languages are valued and visible. An Austrian with a Turkish migration background, he combines personal experience with professional expertise in language education, multilingualism, and inclusive school development. As a doctoral candidate at the University of Vienna, his research focuses on language-sensitive subject teaching and multilingual practices in schools. His work bridges practical school experience with a strong commitment to educational justice and diversity.

Weinlich, Wolfgang, Dr. PhD, is a Professor of Art and Design at the University College of Teacher Education Vienna. His research focuses on diversity, sustainability, and the transformative potential of art education. He explores how aesthetic and creative practices foster ecological awareness, social responsibility, and critical thinking. As Second Federal Chairperson of BÖKWE, he actively promotes art education in Austria. Through his teaching and international research projects, Weinlich links artistic practice with education for sustainable and inclusive futures.

Zauchner, Sabine, Dr., is the Managing Director of MOVES – The Center for Gender and Diversity. She holds a degree in Psychology and a doctorate from the University of Vienna, as well as a Master's degree in eLearning from the University of Continuing Education Krems. She is also a certified business coach accredited by the Austrian Coaching Council. Her work is guided by the perspectives of her target groups, which is reflected in her inclusive and practice-oriented research across a wide range of topics in the fields of diversity, education, and digitalization. In her applied research, she places a strong emphasis on genuine participation and co-creation throughout all phases. Sabine Zauchner is furthermore an expert in gender equality, a trainer on gender-related topics, and the author of several publications in this field.